

# Hitchcock's Machine Tool Blue Book

FEBRUARY, 1934

TWENTY-NINTH YEAR

## For a Wide Range of Work!



## The DAVIS Keyseater

**Speed Combined  
with Accuracy**

**P**ERFORMANCE data on the Davis Keyseater proves that its wide range, speed, ease of operation and set-up simplicity are factors responsible for substantial cost savings on practically any keyseating job—from a 30" gear to a 1" pinion. Whether your keyseating work is on a quantity production or mixed run basis, you will find it more economical to use a DAVIS.

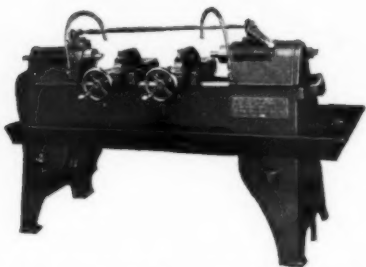
*Send sample parts or blue prints for suggestions on how to reduce your keyseating costs.*

## DAVIS KEYSEATER COMPANY

401 Exchange St.,

Rochester, N. Y., U. S. A.

PUBLISHED AT 508 So. DEARBORN ST. CHICAGO



## CENTERING MACHINES

For drilling, reaming, tapping, countersinking, and similar operations;

on one end or both ends at once. No. 56 shown. Others available. Accurate. Fast.

### BENCH CENTERS

Accurate, compact, portable. Adjustable heads. Quick-acting spindle. Seven sizes.



### 3-WHEEL TOOL GRINDER

For grinding and honing tungsten carbides — steel — stellite. 3 types. Get new circular.



These Sundstrand tools, like our Lathes and Milling Machines, cut costs and make work easier. » » »  
**INVESTIGATE!** Address our Dept. H for details.

# Hitchcock's Machine Tool Blue Book

**Selected  
Circulation**

**20,000  
Monthly**

FEBRUARY, 1934

TWENTY-NINTH YEAR

## Selling is as Important as Manufacturing Then Why Not Experiment More on the Selling End?



Manufacturers of machine tools do more or less experimenting in the mechanical department.

Often a little more experimenting in the selling end would prove equally profitable.

One of the most consistent advertisers in the BLUE BOOK gave us an order for one time "as an experiment."

We do not advocate one-time orders, for they are hardly fair to either advertiser or publisher. They are like sending a salesman once and then dropping the prospect. However, the "experiment" referred to turned out wonderfully well.

Any manufacturer of machine tools or allied equipment could well afford, at our moderate rate, to experiment by trying out the BLUE BOOK for a full year.

It will deliver your message to many more well rated buyers for each dollar expended than any other publication in its field, and it works so well in actual practice that the "experiment" almost solves itself before it is made.

***But try it out! You might be agreeably surprised!***

*Published By*

**Hitchcock Publishing Co.**  
508 S. Dearborn St., Chicago, Ill.

*Consult the Classified Finding Index for your requirements*

# KRW Hydraulic and Sensitive ARBOR PRESSES

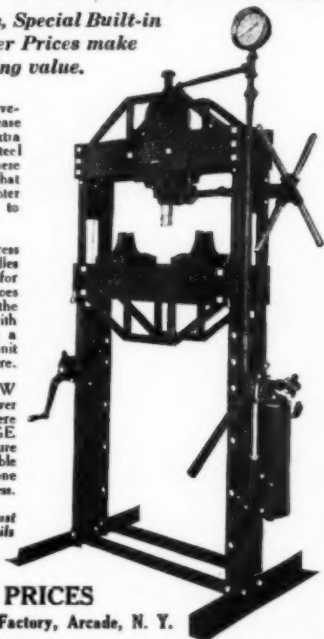
*New Improvements, Special Built-in Features and Lower Prices make them an outstanding value.*

THE last word in convenience, efficiency and ease of operation. Built extra strong and well braced, with steel trusses electrically welded, these presses will withstand strains that would cause presses of lighter and inferior construction to buckle or collapse.

Hand wheel for sensitive press operations has sliding handles which pull out to the ends for increased leverage. Work does not have to be changed from the work table as is the case with other make presses having a separate sensitive press unit mounted on the side or elsewhere.

The importance of this KRW feature as a time and labor saver can be appreciated. Also there is **NO EXTRA CHARGE** for this important built-in feature on a KRW Press. Work table can be raised easily with one hand. A strictly one-man Press.

*Write for special circular, just off the press, giving full details and specifications of all KRW Arbor Presses.*



## PRICES

F. O. B. Factory, Arcade, N. Y.

- |   |          |
|---|----------|
| No. 37—35 ton Hydraulic and Sensitive Arbor Press (hand operated)     | \$126.00 |
| No. 37B—35 ton Hydraulic and Sensitive Arbor Press (air-oil operated) | 126.00   |
| No. 37E—50 ton Hydraulic and Sensitive Arbor Press (hand operated)    | 150.00   |
| (Can also be furnished in air-oil operated at same price)             |          |
| No. 37F—70 ton Hydraulic and Sensitive Arbor Press (hand oper. only)  | 275.00   |
| Gauge and fittings, \$15.00 extra on all presses.                     |          |

## K. R. WILSON

10-16 Lock Street, Buffalo, N. Y., U. S. A.

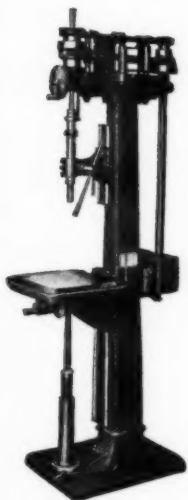
EXPORT DEPARTMENT

90 West St., New York, N. Y.

WEST COAST BRANCH

722 Mateo St., Los Angeles

**FOOTBURT**



## **A Single Spindle Footburt Sipp Sensitive Drill**

**Made in three  
sizes of single  
and multiple  
spindle models**

### **More holes with this machine**

**Why? Because you can change speeds in two seconds or belts in ten seconds—because the automatic idlers keep the belt pulling to capacity at all times—because the full ball bearing equipment and accurate machining gives a smooth, fast cut.**

*Write for No. 650 Folders*

**The Foote-Burt Company, Cleveland, O.**

**FOOTBURT**

**THOMPSON  
12"x36"  
Universal**

**For All Kinds  
of GRINDING**



Plain, edge, die, surface, cutter and reamer, and internal—and good at all of them. Efficient, accurate, dependable.

Work adjusts to a fixed grinding wheel, an exclusive feature that's better.

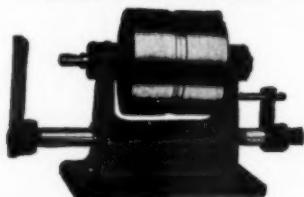
*All standard machines equipped with auxiliary independent coarse cross feed for surface grinding.*

**Saves  
Time  
and  
Money**

**The Thompson  
Grinder Co.**

1534 West Main St.,  
Springfield, Ohio

**BURKE**



**For Good Tapping**

Here's the machine for your light tapping. It's fast, accurate, economical, dependable and never breaks a tap or strips a thread. Also use it for reaming, burring, countersinking.

*Circulars on request.*

**The Burke Machine Tool Co., 279 E. 16th St.,  
Conneaut, Ohio**

**ATLAS 9'**  
**Bench Lathe**  
**\$79 cash**

**as shown, less**  
**motor**

**with \$89**  
**motor**

# SAVE

Save on power cost by doing your small work on an economical lathe. This ATLAS 9" LATHE runs from a  $\frac{1}{4}$  h. p. motor, requires no outside shafting or pulleys; will quickly pay for itself. Real 1934 modern design. V-belt drive, self-contained countershaft, runs from light socket. Tested to .001" accuracy before it leaves our factory. 18" between centers, also larger sizes. 4 to 72 threads. Compound rest, hollow spindle, automatic reversible feed; 6 speeds. Full line of tools and fittings.

*Send for free catalogue*

**ATLAS PRESS CO.,** 1850 N. Pitcher St.,  
Kalamazoo, Mich.

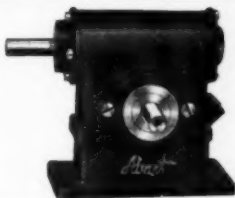


**10**  
**Months**  
**Terms**  
**if you**  
**wish**

## SPEED Reducers

**Fractional Horse Power**  
**Finest Materials**  
**Ball Bearing**

**1½ & 2¼ S.A.C.**  
**Worm Reducer**



**1½ & 2¼ S. A. Worm Reducer**

*Send for Dimensions,*  
*Ratios and Prices*

# Abart

**Gear & Machine Co.**  
4832 W. 16th St., Cicero, Ill.

*We also Manufacture Gears of all Types and Materials.*

# Improved Outlook for Machinery

---

The ability of the machinery industry to score a rapid and well sustained recovery during the final three quarters of 1933 augurs well for the 1934 trend of business. Machine tool orders have advanced steadily for eight successive months, except for a slight recession in September, and the index computed by the National Machine Tool Builders' Association currently stands more than 500% above the March, 1933, low point, and some 50% above the level in July, last, when the peak of general industrial production for 1933 was established.

While this representative machinery index is still considerably further beneath pre-depression levels than is general industry, recovery to date has been impressive. Moreover, additional narrowing of this gap during early future months is tentatively indicated by several constructive influences now operative.

## Government Aid a Powerful Stimulant

An increasing total of governmental funds is now flowing into machinery channels. Machine tool orders for navy yard shops figured prominently in the November upturn, and additional orders placed in December apparently bolstered further the machine tool index for that month. An order for 172 industrial tractors likewise was made in November by the Civilian Conservation Corps.

Public works contracts during recent months increased decisively, and material benefits should begin to accrue to construction equipment producers in the early spring of 1934. Such lines as industrial tractors, highway equipment, pneumatic tools and excavating machinery are expected to rank among the major beneficiaries.

In addition, companies manufacturing equipment used in municipal electric and water plants should secure considerable new business as soon as the initial delays involved in procuring Federal grants are overcome.

In short, governmental activities undoubtedly will provide a positive stimulus to machinery business throughout the first half of 1934, at least, and will go far toward bridging the gap until private business again enters the market on a broad scale.



## **Foreign Trade Prospects Promising**

Dollar depreciation already has aided foreign sales of machine tools and petroleum equipment. This trend is likely to be extended during early future months, particularly should the recent moderation of exchange fluctuation be continued.

Prospects for regaining the important Russian market for American machinery, moreover, are brightened by the current trade negotiations between this country and the U.S.S.R. Exports of industrial machinery to Russia totaled almost \$40,000,000 in each of the years 1930-1931. Once satisfactory credit terms can be worked out, it is apparent that Russia would quickly place substantial orders for industrial equipment, particularly machine tools and oil producing and refining machinery.

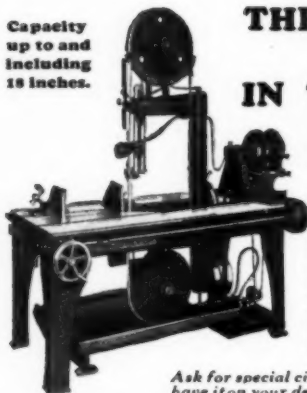
## **Earnings Recovery Substantial**

That the machinery industry, considered as a whole, is close to profitable operation is strongly evidenced by the record of third quarter 1933 returns. Of six representative companies submitting quarterly reports, three showed a net profit, and the composite loss, after all fixed charges, was only \$358,784, or 83% smaller than the third quarter of 1932.

A sales increase of from 25% to 30% over recent levels probably would suffice to show fixed charges of most machinery companies earned by at least a small margin. A gain of this magnitude appears within reasonable expectation over the next six months.—*Reprinted from "Standard Bond Investments," Weekly Advisory Section of January 6, 1934, by permission of Standard Statistics Co., Inc.*

**The publishers of Hitchcock's Blue Book furnish a sworn statement of circulation twice a year to the Standard Rate & Data Service, showing the average distribution for the previous six months.**

Capacity  
up to and  
including  
18 inches.



## THE BUSIEST TOOL IN THE SHOP

### The Marvel Metal Band Saw No. 8—

is well known for its fine construction, and its accuracy in cutting solid bars, pipe, tubing, structural shapes, etc. A valuable feature is its ability to cut on right or left angle without swinging the bar around the shop. IT HAS MANY OTHER VALUABLE IMPROVEMENTS. HUNDREDS ARE IN USE.

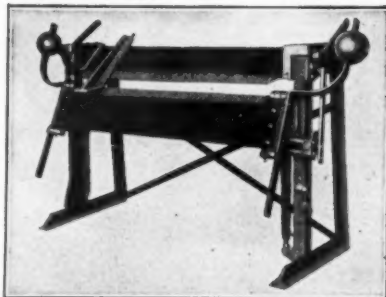
*Ask for special circular so you can  
have it on your desk for reference.*

**ARMSTRONG-BLUM MFG. CO.**

341 N. Francisco Ave.,

Chicago, Illinois

## Whitney - Jensen BRAKE



Capacity 16 gauge  
or lighter.

Can be changed  
into box or pan  
brake in 10 or 15  
minutes, making  
it a dual machine.

Bends opposite  
from any other  
machine.

Stationary platen  
makes very square  
corners possible.

*Send for Our Catalog and Complete Information*

**WHITNEY METAL TOOL COMPANY**

95 FORBES ST.,

ROCKFORD, ILL.



**Strand**  
FLEXIBLE SHAFTS

## Flexible Shafts AND EQUIPMENTS

for Grinding, Polishing, Sanding, Drilling, Lathe-grinding, Screw-driving, Nut-setting and many other operations. Horizontal and vertical types. Quality machines for all industries.

New Catalog No. 26  
Write for copy

Originators and Manufacturers

**N. A. STRAND & CO.**

5001 N. Lincoln St.

Chicago, U. S. A.

## Let Your Losses Stop with the Broken Tap



Don't halt production and pay skilled mechanics to dig it out, often injuring the work.

### A Handy Walton Tap Extractor

Will forestall these unnecessary losses. Insert its flutes into the broken tap, twist the end—an apprentice can do it in a jiffy—and the tap backs out without injury to the threads.

Made in three and four flute styles.

*Let us send it to you for a sixty-day free trial*

**The Walton Company**

302 Pearl St.,

Hartford, Conn.

STANDARDIZATION PAYS



## MOTORIZED SPEED REDUCTION

COMPACT  
EFFICIENT  
ECONOMICAL.



*Submit Your Specifications*

BOSTON GEAR WORKS, INC.  
DEPT. HMT, NORTH QUINCY, MASS.

# BOSTON GEARS

## TAPPING

PERFECT HOLES AT 3000 R. P. M.

WITH THE NEW

### "PROCUNIER"

**BALL  
BEARING**

**TAPPING  
ATTACHMENT**

**FRICTION DRIVE  
At Spindle Speed**

**FRICTION REVERSE  
At Twice Spindle  
Speed**

CAPACITY:

Size No. 1 { Brass  $\frac{1}{4}$ "  
Steel  $\frac{3}{16}$ "

Size No. 2 { Brass  $\frac{1}{2}$ "  
Steel  $\frac{5}{16}$ "

*Also other sizes  
and styles*



*Write for our catalog  
with prices*

## PROCUNIER SAFETY CHUCK CO.

14 S. Clinton St.,

1-1

-1-

Chicago, Ill.

# **— NICHOLSON —**

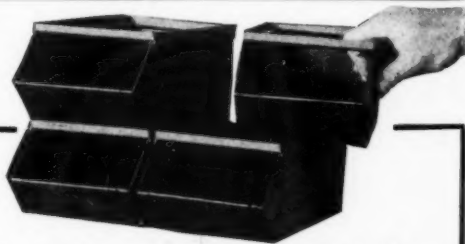
## **Expanding Mandrels**



**J**OBS with bores ranging in sizes from  $\frac{1}{2}$ " to 7" are taken by 14 of these mandrels. They are sold either singly or in sets.

*Write Us for Further Information*

**W. H. NICHOLSON & CO.**  
117 OREGON ST., WILKES-BARRE, PA.



## **Save Space, Time and Labor**

Cut handling costs—eliminate waste motions—save time with Stackbins.

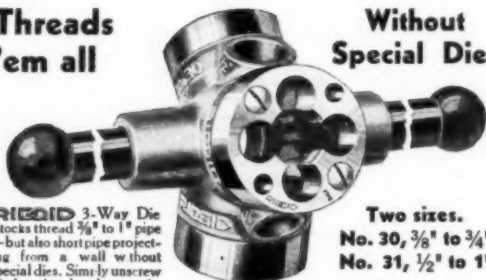
The contents of each individual Stackbin are always accessible without disturbing the bins above or below.

*Write for Illustrated Circular*

**STACKBIN CORPORATION**  
PROVIDENCE, R. I.

**Threads  
'em all**

**Without  
Special Dies**



**RIGID 3-Way Die**  
Stocks thread  $\frac{3}{8}$ " to 1" pipe  
—but also short pipe project-  
ing from a wall without  
special dies. Simply unscrew  
die from head and reverse it.

That's only one feature of these compact, light, powerful tools. Durable, fine-cut-  
ting, positive button dies—no adjustments. Held by 2 screws and 2 lugs, easily  
removed for regrind. You'll like them—see your Jobber.

**Two sizes.**

**No. 30,  $\frac{3}{8}$ " to  $\frac{3}{4}$ ",  
No. 31,  $\frac{1}{2}$ " to 1".**

**The Ridge Tool Co., Elyria, O., U. S. A.**

**RIGID**

**PIPE WRENCHES, CUTTERS, VISES, THREADERS**



## For Light and Heavy Etching

**With 24 Stages of Control.**

The LUMA Master Etchtool fulfills every marking requirement that can be done by an electric Etching outfit.

A Production Tool with as many as 24 different stages or varieties of control for regulating the depth of marking, this tool can be used for extra light marking of machinest scales, micrometers and fine tools or can be used *or extra heavy and deep* marking of rough and unfinished iron, cast iron, forgings, steel plates, etc.

*Send for circular giving  
complete data and details  
of this modern instrument.*



**Built rugged  
for continuous  
work on the  
production  
line.**

**LUMA ELECTRIC EQUIPMENT CO.**  
**DEPT. H.—Main P. O. Box No. 132—TOLEDO, OHIO**

# Grant NOISELESS SPINNING Riveter



One rivet per second.  
Heads highly polished.  
No hammer or tool marks.  
The work is always uniform.  
As tight or loose as desired.  
Works in hard-to-get-at places.  
It's easily operated by cheap help.  
A boy or girl can manipulate it.  
And—it's noiseless in operation.

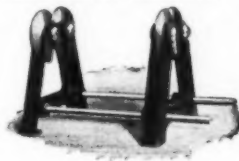
Write today for Catalog, showing several styles. Also send us samples of your work for riveting; we will return them with close estimate of cost.

**The Grant Mfg. & Machine Co.**  
C. E. Station, Bridgeport, Conn.

## Anderson Ever Ready Balancing Ways

**Exceedingly Sensitive**

**Easy to Manipulate**



Made in six sizes to balance anything that revolves from a crank shaft to a 24,000 lb. turbine rotor. They require no special leveling, no adjustment, and no centers.

Equipped with glass-hard spindles, chilled steel discs, and especially sensitive ball bearings, to give accurate, long time service.

| "Swing"                            | 20"  | 40"  | 60"  | 72"  | 96"   | 72"   |
|------------------------------------|------|------|------|------|-------|-------|
| Greatest distance bet. standards.. | 20"  | 30"  | 30"  | 66"  | 88"   | 20'   |
| Capacity in lbs. ....              | 1000 | 2000 | 2000 | 5000 | 10000 | 24000 |
| Approx. shipping weight.....       | 45   | 90   | 150  | 350  | 650   |       |
| Code .....                         | Bend | Bid  | Bis  | Bib  | Ben   |       |

**Anderson Bros. Mfg. Co.**  
1915 Kishwaukee St., Rockford, Ill.

# VISE

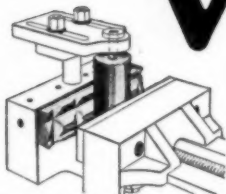


Fig. 3. V-Jaw for Round Work

All Vises are drilled and tapped to take our Standard JIG ATTACHMENTS

ANY VISE WILL PAY

*Send for Circulars*

**THE GRAHAM MFG. CO.**  
70 Willard Ave., PROVIDENCE, R. I.

For Drill Press. Often used on MILLER, SHAPER or PLANER.

Jaws 6', 9' and 12' Long

Flanged all around bottom for bolting down, with three slots at large end not shown.



Fig. 2  
Without Jig  
Attachments

## When You Move

Please drop us a line, giving both your *old* and *new* address. Or if the name of your company has been changed, please tell us the *old* name and the *new* one. That will enable us to keep our mailing list up to date, and will insure your receipt of this publication monthly.

If you wish this book addressed to any particular individual in your plant, we shall be glad to comply with your request. There is no charge. Thank you.

**Hitchcock Publishing Co.**  
508 So. Dearborn St., Chicago, Ill.





## **Acme Standardized Drill Jig Bushings**



Acme Drill Jig Bushings are a standardized product, carried in stock for prompt delivery in over 6,700 standard items. They are completely finished and ready for use. The Bushings are made by the most exacting scientific methods, which insures long wear, accurate fit and absolute satisfaction. Special sizes made to order.

*Send for our Bulletin, which gives complete details, sizes available, and low prices.*



**ACME INDUSTRIAL CO.**  
**419 N. Carpenter St., Chicago**



Two-in-One



Two-in-One

To you Mr. Manufacturer, large or small, who is interested in cutting your machining cost. May we suggest you try our

**Shear Cut End Mills.**  
**You be the judge.**

*Send for catalog*

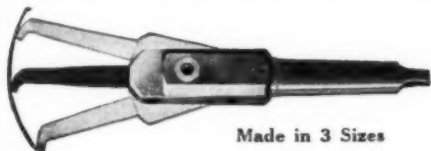
**PROGRESSIVE TOOL & CUTTER CO.**  
**FERNDAL, MICH.**

1 1/4" of Flute



4" of Flute

# MAXWELL E-Z SET BORING TOOL



Made in 3 Sizes

Not a new tool. Has stood the test of years. Standardized by many modern manufacturers; hundreds of shops are using them.

*Write for circular and prices*

**F. A. MAXWELL COMPANY**  
8444 Broadway, Cleveland, Ohio.

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## A PRECISION MICROMETER FOR \$1.50



Size 0 to 1"

Guaranteed to be absolutely accurate. Money refunded if not satisfactory.

Other sizes priced in proportion.

*Send Money Order or Check. Include ten cents to cover postage.*

**BRADLEY MACHINERY CO.**  
6500 Epworth Blvd., Detroit, Mich.

17

# JOIN WHO'S WHO with Hammond Lathes



GENERAL MOTORS  
FORD MOTOR COMPANY  
NATIONAL CASH REGISTER  
SERVEL COMPANY  
ELECTROLUX

## To Mention Only a Few

Here's the only real variable speed—  
and it's just one member of the most  
modern line America offers.

*Hammond Machinery Builders* INC.

1614 Douglas Ave.,  
KALAMAZOO - - - MICHIGAN

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# ARMSTRONG

TRADE MARK REG. IN U.S. PAT. OFFICE

## TOOL HOLDERS



Save All Forging, 70%  
Grinding and 90%  
High Speed Steel

Up Goes High Speed Steel  
and with it the Savings from  
**ARMSTRONG TOOL HOLDERS**

There are ARMSTRONG TOOL HOLDERS of many types, a complete System of Tool  
Holders, holders for every operation on lathes, planers, slotters and shapers.  
Use them on all machines for heavy work, for light. They cut cutting-costs  
and increase profits.

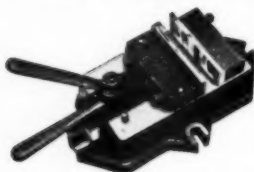
Write for  
Catalog



**ARMSTRONG BROS. TOOL CO.**  
"The Tool Holder People"  
308 N. Francisco Ave., CHICAGO, U. S. A.

# Hartford Milling Vise

**Power — Speed — Strength — Accuracy**



Jaw width ..... 5"  
Jaw depth ..... 1¼"  
Maximum opening ..... 3½"  
Weight ..... 40 lbs

**Power:** Top eccentric handle furnishes tremendous binding power instantly.

**Speed:** Lower cam-faced handle gives immediate quick opening and return.

**Strength:** Steel parts are drop forged, hardened and ground—base is made of special iron. You can rely on the "Hartford" to stand up under hard usage.

**Accuracy:** All fitting parts are ground—alignment of jaws is absolutely certain.

Also made in the swivel-jaw type with hard or soft jaws, maximum opening 2¼".

*Send for descriptive catalog illustrating its usefulness*

We also Build Machinery on a Contract Basis and Design and Develop  
Special Automatic Machinery—Gears Cut to Order.

**Hartford Special Machinery Co.,** 285 Homestead Ave.,  
HARTFORD, CONN.

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## This Publication

Over 29 years ago this publication began advertising the products of reliable manufacturers to the metal-working trade. It is mailed regularly each month to every worthwhile prospective buyer of machinery, equipment, supplies and services in the industry. In the 28 years it has been published, millions of dollars worth of merchandise has been purchased by its readers.

Those who receive this publication regularly read it and respond to its advertising messages. Thousands of plants use it as a buying guide. We believe we sell more products per dollar of advertising than you can obtain in any other way. It is precisely the one medium that can produce profitable results for its advertisers at a reasonable cost.

*Rates, circulation and other data on request*

**Hitchcock Publishing Co.**  
508 So. Dearborn St., Chicago, Ill.

## Abolish Expensive Hand Finishing

*with a*



## Simplex-M Abrasive Band Grinder

This Grinder accelerates production and cuts costs. Hand emerying or filing operations are antiquated in comparison. The use of this new modern machine assures straight grain finishes with sharp edges. *Details of this and other styles and sizes on request.*

**WALLS SALES CORP.,** 96 Warren Street  
NEW YORK

## Gem Drill Press



Made  
In  
3-sizes  
Up To  
10½"

## Vise

Milling Machine



## Vise

Jaws open 6¾"

Plain & Swivel Base Vise

**J.E. Martin Tool & Die Works**

528 W. State St.,

SPRINGFIELD, OHIO

Please send your Machine Tool Blue Book, without cost, to the following members of our organization, who have to do with planning the equipment of our machine shops and the selection or purchase of our machine tools and other shop requirements:

(Give both names and titles)

It is understood that you are to use the above names as a mailing list for your Machine Tool Blue Book only, and that they will not be used for any other purpose.

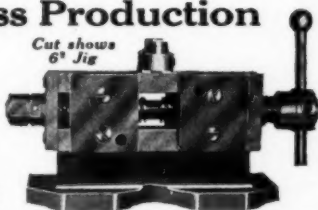
Name \_\_\_\_\_

Street No. \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

# Drill-Press Production at the Lowest Cost

Made In 6", 8"  
and 14" Sizes



## "JOHN'S" Universal Drill Jigs

for  
DRILLING  
TAPPING  
MILLING  
REAMING  
GRINDING  
CENTERING, Etc.

Here is a production tool that will reduce your tooling costs. **INTER-CHANGEABLE JAWS** or **STANDARD "V" JAWS** keep the jigs in constant operation so they will handle practically any production job. Reduces loading time, maintains accuracy and gives plenty of chip room. Outlasts the average drill press.

Write for the Illustrated Folder

**HEUSER MFG. CO.,** 1638 No. Paulina St.,  
CHICAGO, ILL.

## SPEED

### SPOT WELDERS

$\frac{1}{2}$  to 150 K. V. A.

Made foot-operated  
and variable speed  
**AUTOMATIC MOTOR  
DRIVE**, no change  
gears, for welding  
from .0005 to  $\frac{5}{8}$ "  
combined thickness.

Welders for Fine  
Work Priced As  
Low As

**\$55.00**

Submit Your Problems



MANUAL



AUTOMATIC

**EISLER ELECTRIC**

763 So. 13th Street,

NEWARK, N. J.

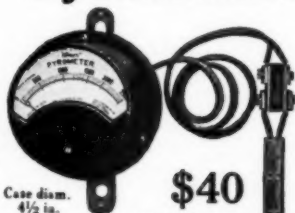
Distributor and Dealer Connections Desired

# "ALNOR" Pyrometers

for the  
Hardening  
Furnace

## MODEL 223

Inexpensive, yet accurate and durable, the ALNOR Pyrometer is used by large and small shops everywhere for heat-treating work. Because of its low first cost and compact size it is also very popular for soft metal melting, galvanizing, die casting, japanning, enameling, measuring flue gas temperatures and many other purposes.



Case diam.  
4½ in.

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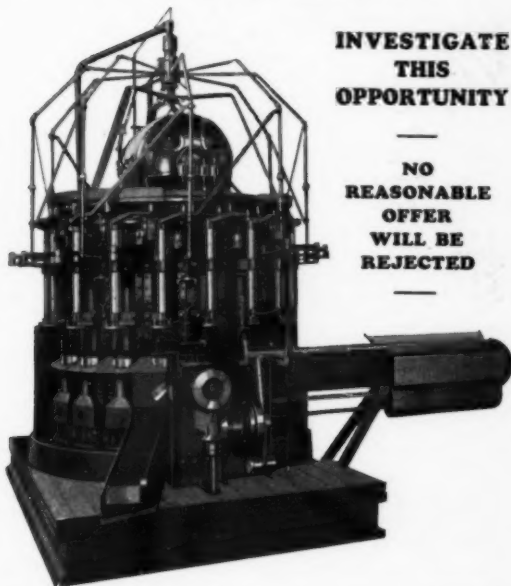
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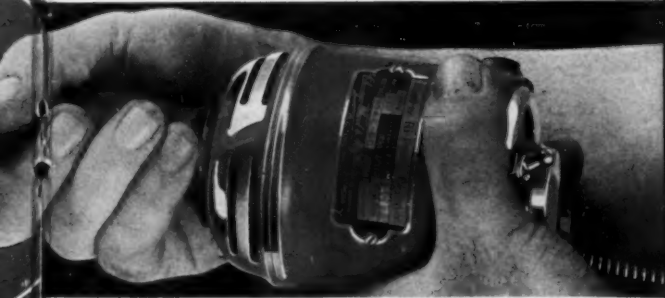
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Sundstrand Machine Tool Co., Rockford, Ill.

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Armstrong-Blum Mfg. Co., 341 N. Francisco  
Ave., Chicago

### Bearings, Ball

Newton Gear Works, Inc., North Quincy,  
Mass.

### Bending Machines, Hand and Power

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Ave., Chicago  
Lewthwaite Mch. Co., T. H. 311 E. 47th., N. Y.

### Bins

Stackbin Corp., Providence, R. I.

### Bolt and Nut Machinery

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### Buffers, Bench Type

Hammond Mch. Builders, Inc., Kalamazoo,  
Michigan

### Buffers, Combination Grinder

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### Bushings, Steel

Acme Industrial Co., 419 N. Carpenter St.,  
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### Centering Machines

Sundstrand Machine Tool Co., Rockford, Ill.

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Newton Gear Works, Inc., North Quincy,  
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Culman Wheel Co., 1359 Altgeld St., Chgo.

### Chains, Silent and Roller

Culman Wheel Co., 1359 Altgeld St., Chgo.

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### Chucks

Heuser Mfg. Co., 1638 No. Paulina St.,  
Chicago, Ill.

### Chucks, Automatic

Proconier Safety Chuck Co., 14 S. Clinton  
St., Chicago

### Chucks, Collet

Proconier Safety Chuck Co., 14 S. Clinton  
St., Chicago

### Chucks, Drill and Tap

Hartford Special Mch. Co., Hartford, Conn.  
Proconier Safety Chuck Co., 14 S. Clinton  
St., Chicago

### Chucks, Quick Change

Proconier Safety Chuck Co., 14 S. Clinton  
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### Chucks, Ring Wheel Grinder

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Burke Machine Tool Co., Connecticut, Ohio

### Collets

Hardinge Brothers, Inc., Elmira, N. Y.

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### Lathes, Polishing

Hammond Mch. Builders, Inc., Kalamazoo, Michigan

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Western Tool & Mfg. Co., Springfield, O.

## Mandrels, Solid

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## Milling Attachments

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## Milling Machines, Bench

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Sundstrand Machine Tool Co., Rockford, Ill.

## Milling Machines, Hand

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Sundstrand Machine Tool Co., Rockford, Ill.

## Milling Machines, Plain

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Sundstrand Machine Tool Co., Rockford, Ill.

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Sun Oil Co., Philadelphia, Pa.

## Oil, Lubricating

Sun Oil Co., Philadelphia, Pa.

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Raumbach Mfg. Co., E. A., 1812 So. Kishwaukee Ave., Chicago

## Pipe Cutters

Ridge Tool Co., Elyria, Ohio

## Pipe Vises

Ridge Tool Co., Elyria, Ohio

## Pipe Wrenches

Ridge Tool Co., Elyria, Ohio

## Polishing and Buffing Machines

Hammond Mch. Builders, Inc., Kalamazoo, Michigan

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Atlas Press Co., Kalamazoo, Mich.  
W. H. Nicholson & Co., Wilkes-Barre, Pa.  
Wilson, E. K., Buffalo, N. Y.

## Presses, Punch

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Lowthwaite Mch. Co., T. H., 811 E. 47th., New York  
Whitney Metal Tool Co., Rockford, Ill.

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## Pyrometers, Portable & Stationary

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Grant Mfg. & Mch. Co., Bridgeport, Conn.

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Grant Mfg. & Mch. Co., Bridgeport, Conn.

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Armstrong-Blum Mfg. Co., 841 N. Francisco Ave., Chicago  
Lowthwaite Mch. Co., T. H., 811 E. 47th., N. Y.

## Scraping Machines

Anderson Bros. Mfg. Co., Rockford, Ill.

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Strand Co., N. A., 5001 N. Lincoln St., Chgo.

## Shaping Machines

Osborne & Sexton Machy. Co., Columbus, O.

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Lowthwaite Machine Co., T. H., 811 E. 47th St., New York  
Whitney Metal Tool Co., Rockford, Ill.

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Benton Gear Works, Inc., North Quincy, Mass.  
Culman Wheel Co., 1359 Altgeld St., Chgo.

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Culman Wheel Co., 1359 Altgeld St., Chgo.

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## Stud Setters

Proconier Safety Chuck Co., 14 E. Clinton St., Chicago

## Tap Extractors

Walton Co., Hartford, Conn.



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## Tapping Attachments

Procurer Safety Chuck Co., 14 S. Clinton St., Chicago, Ill.

## Tapping Jigs, Universal

Heuser Mfg. Co., 1638 No. Paulina St., Chicago, Ill.

## Tapping Machines and Attachments

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Procurer Safety Chuck Co., 14 S. Clinton St., Chicago, Ill.  
Whitney Metal Tool Co., Rockford, Ill.

## Thermometers, Resistance Type

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Western Tool & Mfg. Co., Springfield, O.

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Brotherhood, Percy M. & Son, 114-118 Liberty St., New York City  
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Eastern Machinery Co., Cincinnati, O.  
Elyria Belting & Mch. Co., Elyria, Ohio.  
Empire Wrecking & Salvage Co., 372 West Grand Ave., Chicago  
Easley Machinery Co., E. 1., 325 Rees St., Chicago, Ill.

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Midwest Equipment Co., 628 W. Lake St., Chicago, Ill.  
Mid-West Machine Tool & Supply Company, Ivesport, Iowa  
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Waters, C. H., Elkhart, Ind.  
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Wigglesworth Mch. Co., Cambridge, Mass.  
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Armstrong Bros. Tool Co., 308 N. Francisco Ave., Chicago  
Graham Manufacturing Co., Providence, R. I.  
Houser Mfg. Co., 1638 No. Paulina St., Chicago, Ill.  
Martin Tool & Die Works, J. E., Springfield, O.

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 Drill, rad., 8" Cin-Bickford, t. a., s. p. d.  
 Drill, radi., 6" American, t. a., s. p. d.  
 Drill, radial, 6" Dreses, s. p. d.  
 Drill, upright 10" to 36"  
 Engine, gas, horiz. 20 h.p. Bessemer.  
 Flanger, No. 604 capacity, dies.  
 Forge, No. 604 Champion, hearth  
 40" x 30"  
 Forging mch. 14" Acme, st. fr. b. d.  
 Gear cutters, 11", 18" & 24" Gleason.  
 Gear cutter, spur, 36" x 10" Newark.  
 Grinder, int. No. 72 A 3 Heald, 2 m. d.  
 Grinder, elec. 8" B. & D., dbl. end.  
 Grinder, nail die, No. 101 Bridg., m. d.  
 Grinder, rad., 14" M. & D., m. d.  
 Grinder, surface, No. 16 Blanchard.  
 Grinder, surface, No. 2 Reid, b. d.  
 Grinder, tool & cut., No. 2 Walker.  
 Generators, eng., oil, gas, belt & mtr.  
 Hammer, Blacker, power, 35-lbs.  
 Hammer, 90-lb. Bradley, cush. helve.  
 Hammer, 250-lb. Little Giant, b. d.  
 Hammers, Nos. 2-B, 3-B, 4-B, Nazel.  
 Hammers, steam, 600 lb. to 6000 lbs.  
 Keyseater, Nos. 3 and 8 Mitts & M.  
 Keyseater, No. 8 & 3 Baker.  
 Lathe, 7" x 30" Dalton, m. d.  
 Lathe, 14" x 6" Rock, c. g. c., b. d.  
 Lathe, 16" x 6" LeBlond, c. g. c., d. b. g.  
 Lathe, 16" x 6" Monarch, g. h., q. c. g. m. d.  
 Lathe, 14" x 12" Lodge & S., g. h., m. d.  
 Lathe, 18" x 8" L. & S., grd. hd., m. d.  
 Lathe, 24" x 16" Bridgeford, g. hd. m. d.  
 Lathe, 26" x 21" 6" Bridgeford, g. h.  
 Lathe, 48" x 26" Bridgeford, g. hd. m. d.  
 Lathe, turret, No. 6 Warner & S.  
 Lathe, turret, 18" Libby, m. d.  
 Lathe, turret, 24" Steinie, 64" hole.  
 Lathe, tur., 26" Gisholt, 9" hole, m. d.

Miller, duplex, 24" Cincinnati, auto.  
 Miller, pl., Nos. 3 & 5 Cinc., s. p. d.  
 Miller, universal, No. 3 LeBlond.  
 Miller, univ. No. 4-A B. & S., s. p. d.  
 Motors, a. c. & d. c.  
 Nut tapper, Acme, 10-spd 14" s. auto.  
 Pipe machine, 2 Landis, belt drive.  
 Pipe mches., 4", 6" & 8" Oster.  
 Planer, 30" x 30" x 10" Woodward & P.  
 Planer, 48" x 48" x 10" Cinti. 4 hds., m. d.  
 Planer, 60" x 60" x 18" Pond, 4 hds. rev.  
 Planer, 96" x 96" x 33 4 hds. rev. m. d.  
 Planer, 120" x 60" x 20" Niles, 4 h. m. d.  
 Planer, o. s., 36" x 36" x 16" D. & H.  
 Planer, o. s., 48" x 48" x 16" D. & H. m. d.  
 Power drive, Toledo, a. c. cap. 6" pipe  
 Press, arbor, No. 17 Green., 18-ton.  
 Press, auto., McDonald, No. 31-EK.  
 Press, foot, No. 9 Bliss inc., 4200 lb.  
 Presses, o. b. i. Bliss, Nos. 18, 19, 20.  
 Press, No. 69-N Bliss dbl. wt. 4200 lb.  
 Press, No. 4 Nis., o. b. i., grd. 3" str.  
 Press, No. 96-A Toledo, d. c. 8" str.  
 Press, screw, No. 87 Niagara.  
 Press, wheel, 300-ton, motor drive.  
 Punch, hand, Shatz, bar and angle.  
 Punch & s., No. 9-A Badger, d. e. 1/2" 1/4"  
 Punch, EF Cleveland, 36" thr. 1/4" 1"  
 Punch, No. 56 H. & W. 1 1/2", 12" thr.  
 Punch, mult., No. 5 H. & J. 10" & 8".  
 Riveters, air, hammer, spinning.  
 Rolling mill, cold, 8" x 9" Bliss, new.  
 Roll, bend 50" Bertsch, 3/16" init. type  
 Rolls, bending, 12" x 1/2" H. & J. d. e.  
 Roller, thread, Nos. 30, 40, 50, 60 W.-F.  
 Saws, band, 26 and 33" Fay & Egan.  
 Saw, friction, Nos. 2 & 3 Ryerson.  
 Saw, hack, No. 5 Marvel, 6" x 16".  
 Saw, hack, No. 4 Robertson, 8" x 8".  
 Saws, shaping, 13 x 16" Peerless.  
 Screw mchs. Nos. 52, 53, 55 Nat. A.  
 Shapers, 16", 20", 24" & 36" G. & E.  
 Shaper, 14" Steptoe, m. d.  
 Shaper, 48" Morton draw cut, m. d.  
 Shear, angle, 6" x 6" x 1" H. & J.  
 Shears, alligator, 14", 2", 3" & 4".  
 Shear, bevel, Lennox 1/2", b. d.  
 Shear, circle, No. 13" Niagara, b. d.  
 Shears, foot, 30" and 36" Pexto.  
 Shear, guil. No. 5 H. & J. 4" sq., m. d.  
 Shear, squar Nia. cap. 52" x 1/2" m. d.  
 Shear, squaring 8" x 14 ga. Ohl, b. d.  
 Shear, 8" Bertch, 1/2", 18" thr., m. d.  
 Shear, 12" x 1/2" Wheeling, 31" gap.  
 Slitter, gang, No. 3 Wat-Farrell, b. d.  
 Slotter, 36" Bement, crank; 15" Dill.  
 Straightener, 66" x 1" Newbold, m. d.  
 Straightener, 72" Newbold, 9-rolls.  
 Straightener, 4" round Abramson.  
 Str. & sh., No. 1026 B. & J. 9" x 3/16"  
 Testing mch., Brinnell hardness.  
 Tumbling barrel, 18" x 36", b. d.  
 Upsetters, 1" to 6".

## USED AND REBUILT MACHINERY

### FOR SALE BY

**The E. L. Essley Machinery Co.**

**Telephone Lincoln 6320**

**831 Rees St., Chicago**

Drill, radial, 2 $\frac{1}{2}$ ' Mueller.  
Drill, radial, 5' Prentice.  
Drill, radial, Cincinnati-Bick. Univ.  
Drill, radial, 8' Pond.  
Drill, radial, 6' American.

Press brake, Vernon, 14 ga. cap.  
Press, 68C Niagara, double crank.  
Shears, 42" Stoll, 16 ga. cap.  
Shears, 4' Niagara, 3/16" cap., m. d.  
Shears, 10' 3/16" cap. L. & A., m. d.

### FOR SALE BY

**H. F. Wolnick Machinery Sales**

**Phone Lawndale 1777**

**21st & Marshall Blvd., Chicago**

Broaching machines.  
Bench lathes, with benches.  
Engine lathes, 12" to 20".  
Drill presses, 1 to 6 spindles.  
Gear cutters and hobbers.

Grinders, various sizes.  
Milling machines, Nos. 1 to 4.  
Punch presses, sizes Nos. 1 to 7.  
Screw machines, automatic.  
Shapers, 16" to 32".

### FOR SALE BY

**J. Bleser Mfg. & Machy. Co., 16th & Madison St., Springfield, Ill.**

Band saws, wood and metal.  
Boring mill, No. 31 Lucas horiz.  
Electric motors, all sizes.  
Lathes, all sizes \$75. up.  
Lathe, 36x18 Lodge & Shipley, q. c.

Lathe, turret Warner & Swasey (4).  
Millers, LeBlond 3H & transit.  
Millers, Rockford & No. 3 Burke.  
Pipe machines, 2", 4", 6", 8" and 12".  
Punch presses, o. b. i. and arch.

### FOR SALE BY

**The O'Brien Machinery Co.,**

**113 N. Third St., Philadelphia, Pa.**

Automatic, 9/16" "G" Gridley 4-sp.  
Bending rolls, 10' Bertsch,  $\frac{3}{4}$ " cap.  
Boring mill, 72" Gisholt vert., 2 lds.  
Column facer, 14" Espen-Lucas.  
Crane, electric travel, 15 ton a. c. mtrs.  
Drills, all sizes upr., sensl. & radial.  
Flanging machine,  $\frac{3}{4}$ " McCabe.  
Hammer, 800 lb. Erie, steam forging.  
Lathe, 18"x6' Monarch, taper.  
Miller, No. 3 B. & S., pl., s. p. dr.

Lathe, 16"x8' L. & S. geared head.  
Miller, Univ. No. 2B Milwaukee, range 28"x10"x18".  
Miller, Univ. No. 2A Brown & S., range 28"x8"x18".  
Pipe machines, 2, 4, 6, 8 and 12" belt and motor drive.  
Punch, No. 3 Southwark  $\frac{3}{4}$ x1", mtr.  
Punch, Thomas angle duplicator.  
Shear, Niagara 8', cap. 3/16", 1" gap.

### FOR SALE BY

**Geo. M. Bernstein & Co.,**

**225 No. Elizabeth St., Chicago, Ill.**

Bolt cutter, 1 $\frac{1}{2}$ " Reliance, dies.  
Bolt cutter, 2" National, dies.  
Drill, 2 $\frac{1}{2}$ " Fosdick radial, s. p. d.  
Drill, 3' Silver radial, s. p. d.  
Drills, Nos. 2 & 4 Colburn heavy.  
Drill, 4 spindle Fox, No. 1 m. t.  
Drill, 14" C-O, No. 2 m. t., m. d.  
Drill, No.  $\frac{3}{4}$  Avey hshb, 3/16" cap.  
Drill, No. 2 Avey hshb, No. 2 m. t.  
Keyseater, No. 2 Davis, 9 cutters.  
Lathe, 14"x6' Champion, q. c. g.  
Lathe, 14"x6' Star, pl. c. g.  
Miller, No. 1 Kemp, univ., vert. hd.

Millers, Nos. 1 & 2 Kemp, plain.  
Miller, No. 1A Rockford pl., v. hd.  
Planer, 30"x24" x6' Rockford, 1 hd.  
Press, No. 18 Bliss o. b. i.; 1 $\frac{1}{2}$ " stroke  
Scleroscope, Shore, model "C."  
Shaper, 16" Smith & Mills crank.  
Shaper, 20" Kelley crank, back grd.  
Shaper, 24" G. & E. crank, b. grd.  
Tappers, No. 1 & 2 Garvin, auto.  
Tester, No. 1 B. & S. spur gear.  
Tester, Brinell "A" with micro.  
Welder, 5 k. w. Taylor spot.  
Welder, 3 k. v. a. Thompson butt.

## USED AND REBUILT MACHINERY

### FOR SALE BY

**Brown Machinery Co.,**  
 Drills: 24", 26" and 32"; No. 68-D  
 Moline 4-spindle Hole Hog.  
 Grinders: No. 6 Bealy dbl. spindle;  
 No. 220 Badger auto. disc; 12x30"  
 Modern, plain, s. c. c. s.; No. 4  
 Cincinnati, 12x72 cylindrical; P. &  
 W. 36" vertical surface.  
 Hammer, 40 lb. Bradley helve;  
 100 lb. Little Giant.  
 Lathes, 30" Blaisdell, 26" Harrington  
 gap. ext. bed; 26" Putnam, taper  
 att., 18" & 16" Lodge & Shipley;  
 16" & 14" Monarch; 7"x6" Lo-swing;  
 18"x10" South Bend.

**2333 N. 9th St., St. Louis, Mo.**  
 Millers: No. 2 Hendey-Norton, univ.;  
 No. 34 Fox; No. 4 Hendey Lincoln;  
 Planer, 42x42x10 Pond.  
 Press, No. 7 Zeh & Hahneman,  
 Nos. 1, 3, 4 Loshbough Jordan.  
 Punch, Cleveland C in 4"; Rock  
 River Style L in 4".  
 Punch & shear, No. 9C Beloit, 4 in 4".  
 Punch & shear, L. & A. 4" cap.  
 Riveter, No. 5A High Speed, 4".  
 Shaper, 24" Ohio; 20" Queen City.  
 Threaders: 4" Geometric; National  
 1 1/2" double head and single head.  
 Welder, 20 k. w. Agnew.

### FOR SALE BY

**Marr-Galbreath Machinery Co.,**  
 Air compressor, 10x10" Chgo., n.s.b.  
 Air comp., 15-21 cu ft., 175 lb., m. d.  
 Air receivers, 4"x18", 150 lb., (10).  
 Angle roll, No. 3 Niagara, 1 1/2x3/16".  
 Boiler, htg., No. 4 GS-28 Amer., Gas.  
 Bolt cutter, 4" Geometric, m. d.  
 Bolt cutter, 1 1/2" Acme, Landis heads.  
 Boring mill, horiz. 4" bar, Niles.  
 Boring mill, vert., 42" Bullard, s. hd.  
 Boring mill, 30" Colburn.  
 Boring mill, 72" Cincinnati t. (85%).  
 Brake, 8"x14 ga. D. & K., belt.  
 Brake, 48"x18 ga., P. S. & W., hand.  
 Brake 10" Keene toggle, 16 gauge.  
 Brake, 10"x18 ga. D. & K. hand.  
 Brake, 10"x16" Dries & K., power.  
 Brake or press, 10"x10 ga., Ohl.  
 Broaching mch. Nos. 1 & 3 LaPointe  
 Bulldozer, No. 4 W. W., motor dr.  
 Crimping roll, 6 1/2" Robinson, 16 ga.  
 Drills, 20" b. g., p. f.  
 Drill, 26" Rockford, g. f. taper att.  
 Drill, 26" Prentice, b. g., s. h., m. d.  
 Drill, radial, 3" Dreses, 3" Cinn.-B.  
 Engine, Diesel, 200 h. p. horizontal.  
 Forging mch., 1 1/2", 3" & 3 1/2" (steel).  
 Furnace, No. 27 Stewart, Blower.  
 Grinder, 12"x96" Landis pl., for m. d.  
 Grinder, No. 14 Landis universal.  
 Grinder, No. 2 B. & S., surface, b. d.  
 Grinder, disc, No. 4 Gard'r, d. e., b. b.  
 Grinder, universal t. & c. Nos. 2 & 3.  
 Hack saw, 13"x16" Peerless, b. d.  
 Hammer, No. 2-B Naxel, m. d.  
 Hammer, 40 lb. Bradley, H. H.  
 Hammer, 100 lb. Bradley, U. S.  
 Hammer, 800 lb. Erie stm. forg., s. f.  
 Hammer, 1000 lb Chbg., steam drop.  
 Hoists, chain, 1 to 8-tons capacity.  
 Jointer, 6" Fay & Egan; 12" Powers.  
 Keyseater, 2 M. & M., m. d.  
 Keyseater, 24"x24" Morton.  
 Lathes, 13"x5', 16"x8" South Bend.  
 Lathe, 13"x6" Sebastian g. h., a. c. m.  
 Lathe, 14"x6" P & W pan, d-in., t. a.  
 Lathe, 18"x12 Hendey, t. b. t. a.  
 Lathe 19"x10' LeBlond, q. c. g., t. a.

**58 Water St., Pittsburgh, Pa.**  
 Lathe, 22"x10' 10" Greaves-K., q. c. g.  
 Lathe, 24"x12' Fgh., q. c. g., chuck.  
 Lathe, 24"x16' S. & B., chuck, t. a.  
 Lathe, 32"x12' Prentice, q. c. g., t. a.  
 Lathe, 48"x26" geared head, m. d.  
 Millers, hand, Burke & Rockford.  
 Millers, plain, No. 3 LeBlond.  
 Miller, No. 28 Ohio; No. 3 Cin'ti.  
 Miller, 2-GS. Hendey, g. b., s. p. d.  
 Millers, horiz. No. 4 Ohio, 72x30x20"  
 Millers, vert., Becker, 3, 4B, 5B.  
 Miller, No. 14 Garvin plain, (2).  
 Miller, universal No. 4 B. & S.  
 Miller, auto. No. 2-M P & J., s. p. d.  
 Motors, 1, 2 & 3 ph., also d. c.  
 Pipe machine, Williams, 3", s. p. d.  
 Pipe machine, 8" Jarecki.  
 Planer, 24"x24"x4" Pond, 1 head.  
 Planer, 30"x10' W & P., 2-heads.  
 Press, 42-h.p. Toledo, horn, plain.  
 Press, No. 6 Toledo, o. b. i., pl m. d.  
 Presses, o. b. i., 18, 20 Bliss, m. d.  
 Press, 74 1/2 S. Bliss b. g., 10" str.  
 Press, 75 1/2 Bliss, b. g., t. r., 5" str.  
 Press, 78 1/2 Bliss, d. g. t. r., 10" str. (2).  
 Press, No. 80 1/2 Bliss, tie-rod, 32" str.  
 Presses, 250-ton B. & B. tire, vert.  
 Punch, s. e., Badger, 7" thru., 4"x8".  
 Punch, s. e., No. 1 L & A 1 1/2"x1", 30" t.  
 Punch & shear, d. e., 9-A., Beloit.  
 Punch & shear, d. e., 16" thts; 1 1/2"x1'  
 with angle & bars shear blades, m. d.  
 Riveters, 2-A, 5 1/2 B, high speed.  
 Rolls, bend'g, 10' x5/16" Bertach, d. e.  
 Rolls, bend'g, 8' x5/16" Bertach, d. e.  
 Rolls, straightening, 72"x1 1/2", m. d.  
 Shaper, 20" Cin. G. B., a. c. motor.  
 Shapers, 16" and 24" G. & E., m. d.  
 Shaper, 24" P. & J down feed & m. d.  
 Shaper, 25" S. & M., b. g., crk., b. d.  
 Shear, 36"x16 ga. Niagara, foot.  
 Shear, thtless Lennox 1 1/2", 1 1/2".  
 Shear, rotary, 16 ga., Yoder, 24" thr.  
 Shear, 10' x16 ga. Ohl power.  
 Slotter, die, Garvin, cone drive.  
 Wheel press, 60-ton W. S., 34"x8 1/2'.

## USED AND REBUILT MACHINERY

### FOR SALE BY

#### Mid-West Machine Tool & Supply Co.,

Davenport, Iowa

Automatics, No. 00 B. & S.  
Drill, Allen 6 spindle, h. s.  
Drill, ISS Garvin duplex, 24" cap.  
Grinder, 10" x 36" Norton.  
Grinder, No. 10 B. & S. ext.

Hobbers, Nos. 3, 12-B & C.  
Lathe, No. 9 LeBlond multi-cut.  
Millers, Nos. 1 & 2 Brown & Sharpe.  
Radials, 3' Cincinnati Bickford.  
Turret lathe, Nos. 2 & 6 Warner & S.

### FOR SALE BY

#### Percy M. Brotherhood & Son

114-118 Liberty Str., N. Y. City

Boring mills, 10' Niles; 72" Sellers; 44" 54" 61" Bullard Maxi-Mills.  
Lathes, 72" x 40' Putnam; 72" x 50' Pond.  
Forging Machines. Press Brakes, Shears, Bending Rolls, Planers, Shapers.  
Grinders, Milling Machines all sizes.  
All Selected Tools.

### FOR SALE BY

#### Wigglesworth Machinery Company

199 Bent Street,

Cambridge, Mass.

Boring mill, No. 0 G. & L.  
Engraver, E-5 Keller.  
Miller, 6" x 18" P. & W. thread.  
Miller, 6" x 80" P. & W. thread.  
Miller, No. 2 B Milwaukee univ.

Miller, 48" x 24" x 10' Ingersoll.  
Nibbler, No. 1, 6" Campbell.  
Seamer, No. 3 B Bliss, double.  
Shear, No. 1120 Niagara power, 18 ga.  
Jones & Lamson, 2 spdl., like new.

### FOR SALE BY

#### Brownell Machinery Co.,

150 Pine St., Providence, R. I.

Boring mill, 42" Bullard N. E., m. d.  
Broaching machine, No. 2 Lapointe.  
Cam cutter, P. & W. automatic, s. s.  
Drill 8 spindle, Natco, 1/2".  
Drill, 4-spindle, H. & W., h. s., b. b.

Gear cutter, No. 13 Brown & Sharpe.  
Grinder, No. 2 Morse universal.  
Miller, No. 2B Hendey universal.  
Screw machines No. 2 B. & S. auto.  
Shear, Gate, No. 5 Hilles & J., 1/2".

### FOR SALE BY

#### Bradley Machinery Co.,

6500 Epworth Blvd., Detroit, Michigan

Drill, No. 9 Minster.....\$ 450.  
Drill, No. 2 Aveymatic p. f. m. d. 225.  
Gear shapers, No. 7 Fellows,  
(5), high serials, each.....1000.  
Jig borer, No. 4 Swiss.....2750.  
Mill, No. 3 Cincinnati univer-  
sal, s. p. d., rect. overarm.... 1200.

Millers, Whitney No. 6 hand 12 & 45.  
No. 15 Garvin vertical..... 450.  
No. 33 Abrasive, mtr. in base. 500.  
Press, No. 55 Toledo..... 800.  
Die slotter, Garvin..... 125.  
Slotter, P. & W. 10"..... 1000.

### FOR SALE BY

#### E. L. Klauber Machinery Co.,

320-22 S. Third St., St. Louis, Mo.

Gear cutters, No. 14 Whiton automatic, 34" capacity, motor drive, complete.  
Lathes, 22"-34" x 12' Lodge & Shipley, q. c. g., d. b. g., also many others.  
Screw machines, No. 0 Brown & Sharpe automatic; also many hand machines.  
Shapers, 20" Gould & Eberhardt "High Duty", also others.  
Surface grinder, No. 2 LaSalle automatic, with magnetic chuck.  
Turret lathe, No. 3 Wood tilted turret; g. f. h. with bar feed and collets.

## USED AND REBUILT MACHINERY

### FOR SALE BY

Wm. C. Johnson & Sons Machinery Co.,

1211-1223 Hadley Street,

St. Louis, Mo.

Air compressors, all sizes.  
Bar shear, 5' x 1 1/2'.  
Boring mill, 36" Gisholt.  
Bulldozer, No. 3 Williams-White.  
Drills, 1 spindle Avev.  
Grinder, Wells Bros. universal.  
Grinder, 12" x 60" Landis universal.  
Grinder, No. 60 Heald cylinder.  
Hammer, 60 lb Bradley helve.  
Lathe, 16" x 9' Lehman.  
Lathe, 20" x 17' Lehman, geared hd.  
Lathe, 24" x 12' Schumacher & Boye.  
Lathe, 24" x 48" x 18' McCabe, 2-spd.  
Lathe, 30" x 18' Lodge & Shipley taper attachment.

Lathe, 36" x 15' American, q. c. g.  
Millers, Nos. 3 & 4 Brown & S., pl.  
Miller, No. 3 Brown & S. universal.  
Miller, No. 35 Ohio.  
Pipe machine, 4 and 8".  
Planer, 60" x 48" x 10 Gray.  
Press, No. 1 1/2 Bliss toggle.  
Press, No. 24 Toledo cam drawing.  
Press, No. 723 Toledo cam drawing.  
Punch, No. 14 W. W., 12" throat.  
Punch, two 20" throats, cap. 1" in 1"  
Sand slinger, Beardsley & Piper.  
Shaper, 16" Smith & Mills.  
Shaper, 24" American, motor drive.  
Tapper, auto., Rickert & Schafer.

### FOR SALE BY

The Jones Machine Tool Co.,

Front & Pike Sts., Cincinnati, Ohio

Bolt cutter, 1 1/2" Landis, single spdl.  
Bolt cutter, 1 1/2" Landis, dbl. spdl.  
Boring mill, No. 32 G. & L., s. p. dr.  
Gear cutter, No. 13 B. & S., bevel & sp.  
Gear hobber, 12 Adams, Farwell.  
Gear hobber, 12" Barber-Colman.  
Grinder, No. 1 Diamond surf. 12x24"  
Grinders, disc, various sizes.  
Lathes, shapers & planers, all sizes.  
Milling machines, all sizes.  
Nibbler, No. 1 Gray 3/16" capacity.  
Radial drills, various types.  
Shear, 8' L. & A. 3/16" cap., 18" gap.  
Shear, 10' Poorman 10 gauge.  
Shear, 62" Niagara 10 ga. 15" gap.

Shear, 37" Toledo 16 ga. 15" gap.  
Welder, 20 k. w. Gibb spot.  
Welder, 35 k. w. Federal spot.  
Upsetters, 2" Ajax, belt drive.

#### PRESSES

No. 1, Bliss, toggle.  
No. 32 B Toledo 38" dbl. crank, grd.  
No. 91C Toledo 36" dbl. crank, plain.  
No. 40B Robinson 42" dbl. crk., grd.  
No. 43 Robinson 46" dbl. crank, grd.  
No. 5 Toledo, plain, o. b. incl.

#### PRESS-BRAKES

60" V. K. & V., 16 ga., motor drive.  
120" Ohl. 10 ga. belt drive.  
120" Bertsch, 3/16", motor drive.

We have a large stock—Send for new list

### FOR SALE BY

Scott-Bansbach Machinery Co.,

4607 West 20th St., Chicago, Ill.

|  |   |           |
|--|---|-----------|
| Miller, Ingersoll slab, 42"x36"x9'                                   | 8 | 400.      |
| Nibbler, Gray Metal Cutter, 5/32"x36" throat, 1 1/2 h. p. motor      |   | 425.      |
| Planer, 24x24x8 Fitchburg, 1 head                                    |   | 100.      |
| Planer, 36"x36"x12" Cincinnati with 2 heads                          |   | 800.      |
| Press, No. 30A Perkins o. b. i., 2" stroke, 1500 lbs., 18 ton        |   | 100.      |
| Press, No. 3 Walsh, o. b. i., 2 1/2" stroke, 2100 lbs., 22 ton       |   | 175.      |
| Punch, 10" throat, single end, Kneeland or Spaulding                 |   | each 100. |
| Saw, No. 5 Marvel high speed 6"x6"                                   |   | 75.       |
| Scleroscope, Shore complete  |   | 125.      |
| Screw machine, No. 1, B. & O. plain head, 13/16" capacity            |   | 125.      |
| Screw machine, No. 2 Foster, friction back geared, 1" capacity       |   | 175.      |
| Shear, 30" Bertsch, 16 gauge, 12" gap, foot power                    |   | 75.       |
| Separator, Curtis oil, 1 bushel                                      |   | 200.      |
| Separator, oil, American 1 1/2 bushel                                |   | 150.      |
| Separator, McKinzie for separating chips, belt drive                 |   | 200.      |
| Shaper, 16" Smith & Mills hvy. duty, back geared crank, vise and c/s |   | 200.      |
| Shaper, 20" Cincinnati, crank, back geared, vise and c/s             |   | 350.      |
| Threader, H. & G. 1" capacity, bench type                            |   | 100.      |
| Turret lathe, 24x10" Milholland, for chuck and bar work              |   | 400.      |
| Turret lathe, 24" Steinle, 4" hole, side carriage                    |   | 200.      |

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### FOR SALE BY

**J. L. Lucas & Son, Inc.,** - - - **3 Fox St., Bridgeport, Conn.**

Late Type Toolroom Equipment.

Lathes, 14"x6' Monarch motor in base, Timken head, (2).

Lathe, 16"x8' American motor in base.

Miller, No. 2 Van Norman duplex, late type.

Shapers, 15" and 24" Gould & Eberhardt, motor drive.

Surface grinder, No. 33 Abrasive, motor drive.

### FOR SALE BY

**Davis Machinery Co.,** **St. Clair & Washington Sts., Toledo, Ohio**

Boring mill, 24" Bullard, side head.

Grinder, No. 2 Diamond surface.

Hammer, No. 3A High Speed.

Lathe, 20"x10' American c.g., d.b.g.

Miller, No. 2 Brown & Sharpe univ.

Miller, No. 2 Rockford universal.

Millers, Model C Becker, vert., (2).

Press, 18-C Bliss o. b. i.

Press, No. 3 Niagara o. b. i.

Shaper, 20" Ohio back geared.

Slotter, 6" Newton.

Tappers, No. 2 & 2X Garvin, (4)

### FOR SALE BY

**Segal Machinery Co.,** - - - **810 W. Lake St., Chicago, Ill.**

Brake, 8' Dreis & K., 18 ga., forms.

Lathe, 18x8 Walcott, c.g., chucks.

Press, No. 8 Cleve. o. b. i., 3" st. fly.

Compressor, Ingersoll-Rand 2-stage, 9x12 and 14x12 cylinders.

Converter, 220 k. w. Westhse. v. d. c., 800 amp, a. c., 3 ph., 60 cy., 1200 rpm.

Screw mach., 4" cap. Davenport auto

Shaper, 16" Milwaukee, vise & c/s.

Shear, 62" Niagara, ft. pwr., 18 ga.

### FOR SALE BY

**Midwest Equipment Co.,** - - - **628-30 W. Lake St., Chicago, Ill.**

Air compressors, 8x8, I. R. compl.

Gear hob., No. 12, 3 B.-C., arbor, gra.

Lathe, 19"x8' Sidney, q. ch., d. b. g.

Miller, No. 2 Cincinnati univ., comp.

Miller, No. 29 Ohio universal, comp.

Press, 30 ton Lucas straightening.

Press, No. 3 Walsh, o. b. i.

Press, No. 78-C Niagara dbl. crank.

Punch press, No. 4 Rock. b.g. 13" st.

Punch press, No. 5 H. & K. o. b. i. 3"

Screw mchs., Nos. 4 & 3 Foster, w. f.

Shear, Quickwork, pwr. d. i. 14 ga. cap.

Spot welders, 13 1/2 k. w. Fed. 24" arm.

Spot welder, 19 kva Thom., 14" arm.

Planers, Lathes, Screw Machines, Air Compressors, Woodworking Machines.

### FOR SALE BY

**McDonald Machinery Co.,** **1535 N. Broadway, St. Louis, Mo.**

Bolt mchs., Landis & Acme 1 1/2".

Boring mill, Lucas & Bulhor. & vert.

Brake, D. & K. 6' 10 gauge, power

Drills, Cin-Bickford 3' & 3 1/2' radials.

Drill, Moline 32-spindle hole hog.

Gear hobber, G. & E. 24" & 60".

Grinders, B. & S. No. 2 surf. & univ.

Grinder, Cincinnati 14"x72" plain.

Keyseaters, M. & M. No. 2.

Lathes, Hendey 20"x10', 13"x8' &

20"x12' grd. hd.: 50 others in stock.

Milling machines, B. & S. No. 5, vert.

Milling machines, Van Norman

No. 2 duplex; B. & S. No. 1 1/2 Cinc.

No. 1 1/2, Hendey No. 1-B, Kemp.

No. 3; Ohio No. 29 B. & S. No. 2-A

single pulley drive, all universal;

Kemp, No. 1, LeBlond No. 2-H;

B. & S. No. 3-B, s. p. d., Cleve-

land No. 2, s. p. d., all plain,

Cincinnati 12" Mig.

Pipe mchs., Curtis, H. & K. 12" m. d.

Punch press, d. c. grd., 79" between

uprights, 5" stroke, wt. 38,000 lbs.

Screw machines, Foster No. 5, gr. hd.

Shapers, G. & E. S. & M., Cin., Ohio,

American, Steptoe, Queen City,

12", 16", 18", 20", 24" and 26".

Square shears, Bertach 10' 16 ga.

Turret lathes, W. & S. No. 2A univ.



## USED AND REBUILT MACHINERY

### FOR SALE BY

**J. L. Lucas & Son, Inc.,**                      **3 Fox St., Bridgeport, Conn.**  
**PRATT & WHITNEY THREAD MILLERS**

We are very fortunate in having the following to offer—

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| 4½"x12" V belt, countershaft dr., (3) | 6"x45" s. p. drive, arr. for motor.  |
| 6"x14" V belt, countershaft drive.    | 12"x45" s. p. drive, arr. for motor. |
| 6"x45" V belt, countershaft drive.    | 6"x80" V belt, countershaft drive.   |

Specifications, Serials and Price will be rendered upon receipt of your request.  
State Size Wanted.

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**The Elyria Belting & Machinery Co.,**

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Bending brake, 10' D. & K. Chicago Steel, 18 ga.  
Bulldozers, Nos. 3 and 5 Williams & White, 16 and 20" strokes.  
Forging presses, Consolidated Nos. 55, 56 and 56½.  
Hammer, power, 75 lb. Beaudry Champion.  
Punch, double end. Cleveland Punch & Shear, cap. 1" thru 1", 12" throat at each end, arch jaw.  
Special press, Toledo No. 55, s. s. d. b. g., 16" stroke.  
Squaring shear, 10' Cleveland, will cut ½" plate, 30" gap, weight 24000 lbs.  
Squaring shear, 8' Toledo, No. 500, 17" gap.

### FOR SALE BY

**Reliance Machinery Sales Company**

**1405 Brighton Road, N. S.**                      **Pittsburgh, Pa.**

|                                      |   |
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| Automatic, 1½" Cleve. 4-spd., m. d.  | Press, No. 2 Wat.-Farrell, 710 lbs.     |
| Drill, 4 spindle No. 4 Colburn Mfg.  | Press, 64" Bliss double crk., No. 54.   |
| Drill, 4 spindle No. 2 Colburn, Mfg. | Press, No. 14 Bliss Toggle, 80,000 lb.  |
| Drill, 4' Rickford radial, gear box. | Press, No. 591 Toledo, 145,000 lb.      |
| Drill, 4' Western radial, motor dr.  | Shaper, 16" Whipp, b. g., vec ram.      |
| Hammer, 300 lb. Bradley up. helve.   | Shapers, 24" & 32" G. & E. 230 v. d. c. |
| Hammer, 100 lb. Beaudry upright.     | Shear, squar. 60"x18 ga. Streine.       |
| Lathe, 45"x20' Betts-Bridge., m. d.  | Screw mach., No. 4 W. & S. univ.        |
| Miller, No. 1½ Rockford universal.   | Tapper, 1½" Acme, 6-spd. nut.           |
| Miller, No. 2½ Rockford, vert. att.  | Shear, alligator, hi. knife, 1½" sq.    |

### FOR SALE BY

**F. A. Schack, Trustee-in-Bankruptcy,**

**Fort Wayne National Bank,**                      **Fort Wayne, Indiana**

Boring mill, 10' Niles, vertical, belt drive.  
Boring mill, No. 2 Barrett, horizontal, belt drive.  
Boring mill, No. 0 Detrick & Harvey, belt drive.  
Boring mill, 38" Binsse, horizontal, belt drive.  
Crane, 20 ton J. & J., E. O. T., 40' span, d. c.  
Crane, 5 ton Bedford, E. O. T., 29'6" span, d. c.  
Drill, 6' Baush, radial, belt drive.  
Drill, 3'6" Baush & Harris, radial, belt drive.  
Gear planer, 96" Gleason, motor drive.  
Hammer, 1500 lbs. Morgan, steam or air.  
Lathe, 32"x27' Putnam, belt drive.  
Planer, 45"x45"x12' Niles, 2 heads, belt drive.  
Planer, 45"x45"x16' Niles, 2 heads, belt drive.  
Planer, 96"x48"x13' Pond, 4 heads, belt drive.  
Planer, 72"x72"x24' Niles, 4 heads, belt drive.  
Slotter, 12" Freeland, crank, belt drive.

# Modern Machine Tools

## ENGINE LATHES

- 14"x6' American, geared head.
- 14"x14' American grd. hd. motor in leg.
- 16"x6' Lodge & Shipley, sel. head.
- 16"x8' American, bowl head.
- 17"x8' Sidney, cone head, taper.
- 18"x8' Hendey, yoke head.
- 18"x10' American, geared head.
- 18"x10' Boye & Emmes, cone hd., tap.
- 20"x8' Hendey, geared head.
- 24"x8' Walcott, cone head.
- 24"x10' American, geared head.
- 24"x10' Creaves-Klusman, cone head.
- 25"x12' LeBlond, cone head.
- 36"x14' American, geared head.
- 36"x18' American, cone head, taper.
- 36"x28' American, geared hd., taper.
- 36"x40' American, geared hd., taper.

## MILLING MACHINES

- No. 1 1/2 BS, 2B, 2BS, 3B Milwaukee Plain, double overarm.
- No. 1M, 2M, 2, 3, 4, 5 Cincinnati Plain, s. p. d., flanged spindle.
- No. 3B, 4B B. & S. pl., m. d., taper sp.
- No. 5 Cin. Plain, rect. overarm, m. d.
- No. 1 1/2 Brown & S. Univ., cone.
- No. 3, 4 Cincinnati Universal, s. p. d.
- No. 3, 4 Brown & S. Univ., m. d.
- No. 2H, 3 Brown & S. Plain, cone.
- 18", 24", 48" Cincinnati Auto. duplex.
- No. 2, 3, 4 Cincinnati Vert. s. p. d.
- No. 1 1/2 B, 2 1/2 B Milw. Vert. m. d.
- 4" Pratt & Whitney, Spline, m. d.

## PRESSES

- No. 1, 2 Consolidated o. b. i.
- D2, DD2 DAG 3 Ferracute drawing.
- No. 3 Michigan o. b. i.
- No. 4, 6 Perkins o. b. i.
- No. 3, 4 Toledo o. b. i.
- No. 4A, 5A, Willard o. b. i.
- No. 6 Waterbury-Farrel Dbl. Crank.
- No. 11, 12 Toledo Horning.
- No. 20 Bliss o. b. i.
- No. 32P, 33 Toledo Upright.
- S51 Ferracute Double Crank.
- No. 83C Michigan Dbl. Cr. Geared.
- No. 90E Toledo D. C.
- No. 94 Bli-s Consolidated.
- No. 206B Toledo D. C. Geared.

## GEAR CUTTERS AND HOBBS

- No. 44 Brown & Sharpe, practically new, spur and spiral.
- No. 3, 4, 13, 13H B. & S. gear cutters.
- No. 2, 3, 12 Barber-Colman hobbors.
- No. 5A Lees-Bradner Gear Hobbers.
- No. 6, 7 Fellows Gear Shapers.
- No. 18H, 18HW G. & E. gear hob.
- 6", 11", 18" Gleason Bevel Gear Generators.
- No. 36BM G. & E. Gear Roughers.
- No. 3 Cincinnati Gear Cutter.
- 12", 30" Ingle Gear Tooth Rounders.

## GRINDERS

- No. 6G Diamond Disc.
- No. 14 Gardner Disc.
- No. 51 Besly mtr, dr. Disc, a. c. mtr.
- No. 70, 75 Heald Internal.
- No. 3 Rivett Internal.
- No. 60, 65 Heald Cylinder.
- No. 16, 26" Blanchard Surface.
- No. 2 Brown & Sharpe Surface.
- 60" Springfield Automatic Face.
- No. 1 LeBlond Univ. Tool & Cutter.
- No. 1, 2, 3, 4, 13 Brown & S. Univ.
- No. 33 Abrasive, motor in base.

## RADIAL AND UPRIGHT DRILLS

- 3 1/2", 5" Cincinnati Bickford Plain.
- 3 1/2", 4, 5, 6, 7" American Triple Purpose
- 4" Drees Plain.
- 4" Drees Universal.
- 4" Hammond Jack Knife.
- 4", 7" Fosdick Plain.
- 5" Reed-Prentice Plain.
- 21", 24", 28", 32", 36" Aurora Upr.
- 21", 24, 28, 36" Cin. Bickford Upr.
- 21", 25" Weigel Upright.
- No. 25 Bausch Multiple.
- No. 26C Fox Multiple.
- No. 30 Natco Multiple.
- No. 121, 216, 217, 220, 310, 314, 417 Baker H. D.
- 3, 4 spindle Colburn H. D. Mfg.
- 2, 3, 4 spindle Allen B. B.
- 1, 2, 4, 6 spindle Avey B. B.
- 6 spindle 21" Hoefler Gang.
- 3 spindle Sirp Ball Bearing.
- No. 4D, 5D Moline Hole Hogs.
- 1, 2, 3 spindle Henry & W. B. B.

## TURRET & MFG. LATHES AND SCREW MACHINES

- Nos. 2, 4, 6, 8 Warner & Swasey.
- Nos. 2A, 3A Warner & Swasey Univ.
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- No. 5A, 6A Potter & Johnston auto.

Write for new Stock List No. 34.

**THE EASTERN MACHINERY CO.**  
3265 Spring Grove Ave., CINCINNATI, OHIO

# See All These Machines Run In Our Plant

**Automatics**, Cleveland 54"; Gridley 14", 4-spd., 24"; Nat'l-Acme # 52, 53, 55; P. & J. # 5A, 6A, 2P.

**Boring Mchcs.**, Barnes # 3; Barrett # 1, 2; Aspen - Lucas 6", 2-spd.; Garvin # 1, 2-spd.; G-L # 0, 350; Lucas # 32; N. B. P. 5"; Rockford 2"; Springfield # 1 Axle Borer; Univ. # 3A.

**Boring Mills**, Bullard 36" New Era; 61" Maximill; Colburn 48", 54"; Gisholt 30", 36", 42", 52", 60"; King 32", 42"; N. B. P. 53", 73"; Pond 72"; Niles 10"; Putnam 48", No. 2, 48" Car Wheel.

**Drills**, (b. b.), L.-G. 1, 2, 4, 6 spd.; Allen 4.5, 6-sp.; H. & W. 2, 4, 6-sp.; Edlund 2, 6-spd.; Avey # 3, 3-spd., # 2, 4-spd.; Sipp 4-spd.

**Drills**, (Mfg.), Colburn # 14 & # 2—1, 2, 3, 4-sp., D-# 4, D-# 5; F-B # 2, 4-sp.; # 17, 4-sp.; # 4, 4-sp.; # 25, 24", 36"; Moline # 10D, 4-spd.; # 13D, 4-sp.; Baker # 3, 2-sp., # 121, # 317.

**Drills**, (Upright), Cinn. - Bickford 20"; Barnes 20", 22" Self-Oil Grd.

**Drills**, (Radial), American 24", 3", 3" Maxi-speed, 5' pl, 6' Univ., 4' Sena.; Western 3", 6"; Reed-Pren, 4", 6"; N. B. P. 4' Univ.; Hammond 4"; Carlton 24".

**Gear Cutters**, B.-C. # 3, 12; G. & E. 12", 24", # 9-H, # 36-H, 18-H, # 36 B. M.; Gleason 6", 18", B. & S. # 3, # 5, 48", # 13; Fellows # 6, # 7.

**Grinders**, (Plain), B. & S. # 10, 11, 12; Norton 6"x32", 10"x24", 10"x50", 10"x72", 10"x96", 14"x36", 14"x72", 10"x50", 18"x96", 18-30x96" gap; Landis 10"x20", 10"x24", 10"x36", 10"x52", 12"x72", 16"x48" crankpin, 20"x96", 20"x120", 26"x96", 26"x120"; Bryant 10"x18" with 20"x10" wheels; Cincinnati 8"x36".

**Grinders**, (Univ.), Bath # 2, 10"x25"; B. & S. # 2, 12"x30"; Landis # 2A, 16"x32", # 1, 10"x20"; Oakley # 2;

**Grinders**, (Internal), Heald # 70; Bryant # 20 deep hole, # 10.

**Grinders**, (Misc.), Arter 8"; Heald # 200, 8", # 22, 12", # 255, 12"; Abrasive # 33; Besly # 14, 30"; Gardner # 1, 13"; Cochrane-Bly # 11.

**Lathes**, (Screw Cutting) Am. 14"x6", 18"x8", 18"x10", 20"x10", 30"x12", 20"x16", 20"x20", B-E 28"x12"; Bradford 16"x6"; Bridgeford 26"x9", 26"x10", 26"x12", 26"x16", 36"x17" oil country, 36"x14"; Chard 16"x7"; Cisco 24"x11"; Greaves-Klusman

14"x6", 16"x8", 16"x10"; Hendey 16"x6"; 16"x8", 24"x8"; Johnson 36"x16", LeBlond 14"x6", 14"x12", 15"x6", 19"x8", 20"x10", 25"x12"; L. & S. 16"x6", 16"x8", 16"x10", 18"x10", 18"x14", 30"x8", 20"x12", 20"x14", 20"x16", 22"x10", 24"x12", 24"x18", 30"x12, 36"x14, 36"x22; Pond 48"x50"; Putnam 66"x21" tr. gd.; Reed-Prent. 16"x8", 16"x9", 18"x10", 18"x13", 20"x10", all g. h.; Sebastian 13"x6" m. d.; Sidney 16"x14"; W-B 18"x12", 24"x10"; Willard 13"x6"; Walcott 18"x14".

**Lathes**, (Mfg.), LoSwing 34"x36", 34"x60", 34"x108", 4"x15", 7"x60", 8"x60"; LeBlond # 12 Multicut, 17x6 Auto.; Porter Cable 9"x18"; Adams 13"x4 short cut; Sundstrand 16"x6", 16"x10".

**Millers**, (Hand) Whitney # 6; US # 1. **Millers**, (Pl.), B. & S. # 0, 1, 2, 2Y, 21, 2B, 3, 3B, 4B, 5B; Cinn. # 1, 2, 2M, 3, 3S, # 4; Kemp Smith # 1, 2; Milwaukee # 1B, 2B. Timken brgs.; Ohio # 20, 34; Becker # 25, 5B.

**Millers**, (Univ.), Cincinnati # 2M; 2 HP, # 3 HP, # 4 HP; B & S. # 2.

**Millers**, (Vert.), Becker # 1, 4B, 5, 6; Cinn. # 2M Timken brg., # 2 HP, # 1 HP, # 4 HP; B. & S. # 3, 5.

**Millers**, (Mfg.) Briggs B 42", 52"; B. & S. # 13B; Cinn. 18", 24", 48" auto.; Kemp. # 33, late spindle, nose; Sund. # 3 Rigid-mill; Hendey # 8 Duplex; Becker # 7H; P. & W. # 12; Garvin # 2, 3 Duplex.

**Millers**, (Slab) Ingersoll 24"x20", 24"x12", 45"x17", 50"x20"; Newton 36"x7"; B & S 24"x5" open side, 30"x10", 3 hds., 20" dbl. end col. facer.

**Millers**, (Thread), P. & W. 44"x12", 6"x14"; Foster # 1 Lees Brad. # 3E.

**Planers**, Cinn. 24"x6", 30"x18", 36"x18", 56"x10", 56"x16", 56"x32", 72"x10"; Gray 24"x12", 36"x24", 48"x10", 72"x12"; Clev. 36"x8" open side; N. B. P. 36"x16", 48"x10", 48"x16", Putnam 48"x18" late model.

**Presses**, Bliss # 20, 203; Rockford # 3, 4 geared; Toledo 203, 32", # 58 swaging; V & O. # 2; Clev. # 30-32"; Hamilton # 54-55"; H. & W. 25 & 50 ton Dieing Machine.

**Shapers**, S & M. 16"; Cinn. 24" cone and spd.; G. & E. 24" & 32". **Turner Lathes**, W. & S. # 4-A, 3-A, 1-A, 8, 6; Foster # 1-B; B. & S. # 6, 4; Libby 26", 18"; Gisholt 34", 21", # 4-L.

*Money-back Guarantee*

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Due to changes in process in the plant of one of the leading manufacturers in Indianapolis, these tools must be sold at once.

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No. 30 Natco Drill, with tapping attachment.

No. 3B Milwaukee Universal Milling Machine, double overarm.

Hendey Geared Head Engine Lathe 16x8, motor in base, draw-in collets, taper attach.

No. 5 Cincinnati Plain Miller, single pulley drive, high power type, 14x68 table.

No. 13 Brown & Sharpe Universal Tool and Cutter Grinder.

Nos. 1A, 2A, 3A Warner & Swasey Universal Turret Lathes.

Dynamometer Laboratory Test Set, 150 h. p., General Electric.

No. 3D Gisholt Simplematic, motor driven.

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Indianapolis, Indiana

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# High Grade Machine Tools

## Lathes

48"x30" Lodge & Shipley Sel. Grd. Hd.  
 54"x24" H. S. & G. Grd. Hd. M. D.  
 24"x22" Bradford, Q. C., 3 S. C. D.  
 30"x16" L. & S. Patent Grd. Hd.  
 24"x12" L. & S. Patent Grd. H.S.P.D.  
 18"x8" Lodge & S. sel. grd. hd., a. p. d.  
 9x12 Sundat and Grd. Hd. Stub.  
 30"x10" Lodge & Shipley, 3 S. C. D.  
 D. B. G. Q. C.  
 20"x8" Am. Grd. Hd., M. D., late t.  
 20-30"x7" Monarch Helical C.H. Gap  
 16"x6" Lodge-Shipley Sel. Grd. Hd.

## Grinders

Type A Production Abrasive Finishing  
 Style "P" Yankee Drill Grinder.  
 Nos. 50, 55, 60, 65 and 70 Heads.  
 6"x18" Landis Plain, Self Contained.  
 No. 11 Brown & Sharpe Plain.  
 Walker Single Stroke Surface Grinder.  
 10"x52" Landis Plain, Self Com.  
 Rivett Internal Grinder.  
 No. 2 Brown & Sharpe Surface.  
 Nos. 1 1/2 Cincinnati Tool & Cutter.  
 No. 3 Brown & Sharpe Universal.

## Gear Cutters

No. 1 Brown & Sharpe Gear Tester.  
 No. 12 Barber-Colman Hobber, dbl.  
 overarm, late type  
 No. 13 B. & S. Bevel and Spur.  
 36BM Gould & E. Gear Rougher.  
 No. 3, 26" Brown & S. Gear Cutter.  
 18-H Gould & Eberhardt Hobber.  
 6", 11", 18" Gleason Gear Generators.  
**Bolt and Pipe Threaders**  
 1/2" Landis Double-Spindle  
 1 1/2" Landis Sgl.-Sp., Grd. Hd. m. d.  
 1" Acme Class "A" Single-Spindle.  
 2" Landis Sgl.-Sp., lead screw attach.  
 2" Landis Double-Spindle.  
 18" Landis Pipe Threader.

## Boring Mills

24"; 36" and 42" Bullard "New Era"  
 A. C. motor drive.  
 60" Niles Boring Mill, 2 heads.  
 84" Niles Vertical, motor drive.  
 No. 32 Giddings & Lewis Horiz.

## Milling Machines

No. 2 Van Norman Duplex Miller.  
 No. 5 Cincinnati High Power, Rect-  
 angular Overarm.  
 No. 4 Cincinnati H. P. Pl., S. P. D.  
 No. 2-B & 3-B Milw. Pl., Dbl O. A.  
 No. 4-A Brown & Sharpe Universal.  
 Nos. 3; 5-B; 6 Becker Vertical.

No. 3 Cincinnati Vert. H. P., S.P.D.  
 Nos. 2 and 3 Cincinnati High Power  
 Plain. S. P. D. flange nose  
 No. 2 Cincinnati Universal H. P.  
 flange nose: S. P. D.  
 5" Pratt & Whitney Automatic.  
 18" Cincinnati Plain Mfg. Miller.  
 Briggs Manufacturing Miller.  
 No. 33 Kempnuth Automatic.  
 No. 7-H Becker Lincoln type.  
 No. 1 Knight Miller and Driller.  
 6x48 Pratt & Whitney Thread Miller.  
 4 1/2x12 Pratt & Whitney Thread Miller.  
 No. 3 & 3-E Lees-B. Thread Millers.

## Planers

24"x24"x8" Gray Planer.  
 27"x27"x8" Woodward & Powell.  
 36"x36"x10" Gray, 2 heads.  
 26"x26"x12" Whitcomb-B., 2 heads.

## Radial and Upright Drills

3" American Triple Purpose, S. P. D.  
 2 1/2" Cinti-Bickford Radial, S. P. D.  
 No. 2 Colburn Mfg. H. D. 2-spindle.  
 6-spindle Rockford 20" B. G. P. F.  
 No. 40 Natco Straight Line Multi.

## Shapers

16", 20", 24" G. & E., mtr. dr. thru b.  
 16", 20" and 24" G. & E., cone drive.  
 20" Steptoe, S. P. D.  
 24" Potter-Johnson M.D. thru gear box  
 24" Cinti. h. d. mtr. dr. thru gear box.

## Miscellaneous

3x3x1/2 Bertsch Angle Bending Roll.  
 No. 3-B LaPointe Broaching Mche.  
 25 ton Henry & Wright Dieing Mche.  
 50 ton Henry & Wright Dieing Mche.  
 80lb Bradley Cushion Helve Hammer  
 Nos. 1 & 3 Baker Keyseating Mches.  
 No. 2 Mitts & Merrill Keyseater.  
 Nos. 1 & 2 Davis Keyseaters.  
 6 spindle 1/2" Acme Nut Tapper.  
 V-18 Amer. Vert. Broaching Mche.  
 15, 30 & 50 Ton Lucas Forcing Pr.  
 No. 43 Robinson Dbl. Crk. Grd. Press.  
 300 Ton Niles Hydraulic Wheel Press,  
 78" between bars.  
 Dwight Slate Marking Machines.  
 No. 50 Toledo Arch Press, 10" stroke.  
 Wickes Punch & Shear, 48" throat,  
 1 1/4" thru 1 1/4".  
 Peerless Universal Shaping Saw.  
 No. 1 & 2-X Garvin Tapping Mches.  
 No. 4 W. & S. Univ. Turret Lathe.  
 100 K. W. Federal Butt Welder.  
 Shuster Wire Machines; 3/16" & 1/2".

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**Cincinnati Machinery & Supply Co.,** 28 West Second St., CINCINNATI, OHIO

# Latest Type, Equal to New Machine Tools

## Planers:

Cincinnati 72x60x20', 4 heads.  
Gray 48x48x12.  
Gray 48x48x16.  
Gray 60x48x12.  
10 other Planers.

## Grinders:

Landis 20x168" plain, motor drive.  
Landis 6x18, 10x36, 10x52, 10x72,  
10x96" plain.  
Norton 10x72 plain.  
Landis, No. 3 Universal.  
Heald No. 50, 72, Hydraulic.  
Heald No. 60, 65 and 70 Internal.

## Lathes:

From 12" to 60" swing.  
150 machines in stock.

## Boring Mills:

Bullard 61" Max-mill.  
Universal 3½" Horizontal.  
N. B. P. 100" Heavy Duty 2 heads.  
Cincinnati 96", 2 heads.  
Bullards 24", 36", 42" New Era.

## Gear Cutters:

Pfauter No. 4, 78" capacity.  
B. & S. 3, 4, 5 and 6.  
Gould Eberhardt 72x12.  
Fellows No. 6, 61, 615 and 65.  
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## Milling Machines:

Cincinnati No. 2, 3, 4 Horizontal.  
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### You Can Depend On

- 1-3' Corley Plain Radial, single pulley gear box drive.
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- 1-4' Mueller Plain Radial, single pulley gear box drive.
- 3-4' Hammond Type B Sensitive Radials with motor.
- 1-5' American Plain Radial, motor drive.
- 1-5' Mueller Plain Radial, single pulley gear box drive.
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- 1-No. 217 Baker 2-spindle, motor drive.
- 2-No. 2 Colburn Single Spindle, comp. table, motor drive.
- 1-4-Spindle No. 2 Colburn Drill, motor drive.
- 1-No. 4 Single Spindle Colburn Heavy Duty Drill, motor drive.
- 1-No. 3 Minster Single Spindle, plain table, belt drive.
- 2-No. 14 Natco 16x24 Head, motor drive.
- 1-No. 30 Natco 24" round head, motor drive.
- 1-No. 60 Natco 3-way, motor drive.

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16"x8' Hamilton, quick change.

17"x 8' LeBlond, quick change.  
24"x14' LeBlond.

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Automatic, National-Acme.  
1 1/2" cap. Smurr & Kamen.

21" & 24" Gisholt, 5/8" capacity.  
Acme, like new.

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15" ribbon mill, motor drive.

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32" Hoefer, sliding head.

6' ceiling.  
No. 66D Moline hole hog.

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No. 3 Brown & Sharpe Universal.

18" Cincinnati automatic.  
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## MISCELLANEOUS

Band saw, Clark, compound.  
Band saw, Napier 10"x10".  
Gear miller, No. 1 Bilton.

Sand blast, Boland.  
Shear, Loy & Nawrath 3/16" cap. 10".  
Shear, Pettingell, 60" throat.

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**OSBORNE & SEXTON**  
**MACHINERY** Dept. H. **COMPANY**  
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**Automatics**, B&S #90, #0, #2, #2G;  
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**Bending Rolls**, Pyr. 10' 4"; 10' 8"; 8' 4"; 8' 5/16; Initial 8' Bertsch; 42" 10'; 6' 14; 48" 16; #1 Buf. Angle Roller m. d. cap. 3.3x5/16".

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**Brakes**, Hand Chgo. St. 3" to 10" all ga.

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**Press Brakes**, 8' Chgo. Steel m. d.; 10' 3/16 & 10' 5/16" L. & N.

**Presses**, O. B. I. #7 McDon; #5 Rob. #3, #0 L. & J.; #3 Walsh; #20 Bliss

m. d.; Cleve. B. G. 90 tons; Dble. Crank, Tol. #90B 36" bet. upr. 3 1/2" str.; #92C 4" str. 75 tons m. d.; #92G 5" str. 66" bet. upr.; Horn, #16 & 39 Bliss; #14 Nia.; #42 A Tol.; Str. Side, #59 Tol.; #77 Bliss; #51 Tol. Arch 6" Str; Misc. #3 1/2 C Bliss Toggle Draw; 500 ton Embossing; #2W Bliss Wiring; #17 Toledo and #22 Exc. Deep Thr.

**Roller Die Mches.**, 10 sp. m. d. Rolls, outside housing; 5 sp.; 3 sp.

**Saws**, Peerless Shaping, m. d.; 6x6 Racine S. P. D.

**Shears & Slitters**, Niagara Power 12' 10 ga.; 52" 10; 8' 14; 5' 18; 52" 18; 36" 18; 30" 14; 6' 3/16 Berstch; 48" Tol. 16 ga.; 6' 14 ga. Nia. m. d. 95% new; Foot Power, 30" to 120" all gauges; Thrless, Marshalltwn, 16 to 4"; Gang Slitter 30" Adriance; Ring & Circle 18 to 14 gauge.

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6x6 Gardner Rix Duplex, 150 cu. ft. p. m. complete with double riveted tank, pop valve and all tank connections, ..... \$175.

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Ball bearing, 7½" overhang, 2 tables, ½" key chuck, 600-6000 r. p. m. ½ h. p. motor, New ..... \$49.50  
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16" B. G. Smith & Miles, with vise, price, ..... \$150.  
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14x6 LeBlond tool room, fully equipped with full swing four-jaw chuck, face plate, draw bar, collets, pan bed, 1" capacity, like new, ..... \$375.  
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10 K. W. Toledo, 10" reach.  
10 K. W. National, 12" reach.  
10 K. W. Toledo, 14" reach.  
10 K. W. Thompson, 18" reach.  
18 7 K. V. A. Vollans 31½" reach.  
20 K. V. A. Taylor, 12" reach.  
20 K. W. Toledo, 12" reach.  
20 K. W. Taylor, 13½" reach.  
20 K. W. Toledo, 26" reach.  
25 K. W. Toledo, 24" reach.  
47 K. V. A. Taylor, 37½" reach.  
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36"x18 ga. Niagara gap, foot pwr.  
36"x16 ga. Pexto foot power.  
42"x16 ga. Niagara gap, foot.  
10"x14 ga. Kutscheid, motor drive.  
30" & 60" throat Pettingell rotary.  
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Nos. 1, 2, 2½, & 3 Consolidated.  
Nos. 1 & 3 Baurth O. B. I.  
No. 2½ V. & O., O. B. I.  
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No. 6 Adriance O. B. I.  
No. P3 Ferracute.  
No. 5N American Can Co.  
Nos. 64, 65 & 67 Consolidated.  
No. 8-7 Zeh & Hahneman S. S.  
No. 74½ Bliss S. S.  
No. 56 Toledo S. S.  
No. 76 Toledo open back.  
No. 165 Toledo toggle.  
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No. 41 Toledo.  
No. 94 Consolidated.  
No. C82 Ferracute notching.  
150 ton Ferracute coining.  
100 ton Oilgear hydraulic.  
Logemann hydraulic baler.

*1500 Tools In Stock—Send Your Inquiry*

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## LARGE MACHINE SHOP AND FOUNDRY BEING WRECKED

ENGINE LATHES, 16"x8" American q.c.g. comp. & rebuilt; 16"x12" Hamilton q.c.g.  
MILLING MACHINES, No. 35 Cincinnati s. p. d.; Nos. 3 and 33 Kemp Smith.  
WARNER & SWASEY, No. 5 Hand screw machine.  
WARNER & SWASEY, No. 6 Turret Lathe, power feed to side carriage.  
ACME, (Cincinnati) 24" cross slide, flat bed, Turret Lathe rebuilt.  
GISHOLT 18/21", 3 1/2" Turret Lathe, hollow spindle, 2 step cone, used only 18 mo.  
BULLARD, 24" vertical, Turret Lathe with side head, single pulley drive.  
BORING MILL, Niles-Bement-Pond 53" vertical, 2 swiv. hds. on cross rail operated by 2 mtrs. Used less than 1000 hours, looks new, current model machine.  
DRILL PRESS, Barnes camel back, 4-sp. adj. hd., sell with or without spec. head.  
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DRESES-MUELLER, 30" Radial Drill Press, good sturdy mch. for rough work \$150.  
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GRINDER, U.S. Electric Tool snag, 7 1/2 h. p. variable sp. mtr., d. e., 3x34 wheels.  
DRILL PRESSES, Edlund 3-sp., 2 sp. power feed, 1 sp. hand feed, together with 220/440/60 cycle 3 phase motor. Push button starter, excellent shape.  
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DRILL PRESS, Canedy-Otto 20", power feed and back geared.  
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COMPRESSOR, Sullivan, two stage, angle, 14-8 3/4x10 with receiver complete.  
CRANES, 10 ton Whiting, 59' span, 3 motors, cab control, (2).  
CRANE, Sheppard-Niles, 3 motors, ground control, practically new complete.  
CRANE, 3 motors, 42' span, ground control ..... \$250.  
HARDENING ROOM EQUIP.; Stewart 12x18x48" Oven, Sturtevant No. 11 Blower.  
Whiting Cupola 78" Shell. Ladles, Core Ovens, Tools, and many other items.

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27 R. Blanchard vertical, Motor in spindle, 60" Magnetic Chuck.  
No. 16 Blanchard Vertical, Motor in spindle 26" Magnetic Chuck.  
No. 16 Blanchard Vertical Belt Drive 26" Magnetic Chuck.  
36"x144" Brand New Norton Roll, Crowning Attach, Motor Drive.  
24"x144" Landis Plain, With Taper Grinding Attachment.

## LATHES

|  |                          |
|--|--------------------------|
| 48"x18" American.                                  | 24"x14" Lodge & Shipley. |
| 36"x32" Simplex.                                   | 20"x10" American.        |
| 27"x16" American Taper.                            | 16"x10" Lodge & Shipley. |
| All Lathes Geared Head Type. Constant Speed Drive. |                          |

## BORING MILLS VERTICAL AND HORIZONTAL

|                                  |                                   |
|----------------------------------|-----------------------------------|
| 16' Extension Type to 20" Niles. | 61" and 64" Bullard Maxi Mill.    |
| 14' Niles.                       | 42", 36", 24" Bullard New Era.    |
| 90" Niles Bement Pond.           | No. 32 Giddings & Lewis Precision |
| 72" Niles Bement Pond.           | Table Type.                       |
| 72" Gisholt.                     | 8" Bullard Mult. Automatic.       |

## MILLING MACHINES

|  |                                   |
|--|-----------------------------------|
| No. 3 Cincinnati Universal.  | No. 4 Cinc. Vert. Intermit. Feed. |
| No. 1 1/2 B. Milwaukee Universal   | No. 3, 2 Cincinnati Vertical.     |
| No. 5, 4 Cinc. Rect. Overarm.  | No. 5, 4, 3, 2 Cincinnati, Plain. |
| All Millers have Power Rapid Traverse. Arranged Single Pulley Or Constant Speed Motor Drive. |                                   |

## MISCELLANEOUS

96" Gould & Eberhardt Gear Hobber.  
120"x96"x20" Cincinnati 4 Head Planer. Power Rapid Traverse. Forced Feed Lubrication to Vees. Reversing Motor Drive.  
5', 4' American Triple Purpose Radial Drills.

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## Finest Tool Shop in Chicago Area

No. 1A and No. 2 Special P. & W. Jig Bore.

14x6 and 18x8 Hendey Lathes, T.A.

24x16 Boye & Emmes Lathe.

4—1<sup>st</sup> Hardinge Bench Lathe.

No. 5 Hardinge Univ. Milling Mch.

No. 2A B. & S. Univ. Milling Mch.

S. P. D. with vert. hd. & slot. att.

No. 3 S. Cin. Univ. Milling Machine complete S. P. D.

No. 3 Van Norman Duplex fully equip.

No. 3 & No. 4 Cincinnati Hi Power

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36" Bullard Vertical Boring Mill.

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No. 32 Giddings & Lewis Horizontal

Bar, 3" Cap.

Nos. 1, 2, 3 and 4 Screw Machines.

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13 K. V. A. Taylor - Winfield Spot

Welder.

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2" Cleveland Automatic.

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\$5000.00 stock of small tools, micrometers, Johanssen blocks, Brown & Sharpe surface plates, 100 bench vices. All machines can be seen in operation.

## Victor Machinery Company

128 S. Clinton Street,

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### BORING MILLS AND DRILLING MACHINERY

4" Fostick, horizontal, single pulley.

3½" universal, horizontal, motor driven.

51" Niles vertical, 2 heads.

3½" Giddings & Lewis horizontal.

No. 5 Fox multiple spindle drill.

20", 24", 28" and 34" upright.

### LATHES

14" Prentice, geared head, motor drive.

16" Prentice, geared head, motor drive.

16"x8" Lodge & Shipley, geared head.

18"x8" Mueller, cone drive.

24"x12" American, cone drive.

26"x14" Putnam.

30"x14" Prentice.

24"x17" New Haven, loose change.

### MILLING MACHINES

Nos. 2 & 3 B. & S. universal.

No. 1½ B Brown & Sharpe plain.

2—1½ B Kearney & Trecker.

3B Kearney & Trecker.

No. 2 Cincinnati vertical.

No. 42 Oesterlein plain.

No. 4 LeBlond plain.

### GRINDERS

No. 11 Brown & Sharpe cylindrical.

12"x36" Thompson universal.

LaSalle surface grinder.

10" Webster & Perks plain.

42" & 48" Modern plain.

### MISCELLANEOUS

Automatics, No. 00 & 0 B. & S.

Brake, 12"x18 ga. Dreis & Krump.

Pipe machine, 12" Curtin.

Planers, 36"x12" Detrick & Harvey,

open side; 26"x8" Liberty open side;

48"x12" Belmer, 4 hds.; 24"x10"

Gray.

Presses, No. 164 Toledo toggle; No.

166 Consolidated, str. side; Nos. 2, 3

& 4 Toledo incl.; No. 4 Verdin incl.

Shapers, 24" Potter & Johnston; 24"

G. & E. high duty; 32" G. & E.,

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Slotter, 20" Drill, motor drive.

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| Size Net Price      |          |        | Size Net Price     |                 |        |
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| H. S. Slitting Saws | 3x1/2x1  | \$1.19 | H. S. Side Cutters | 2 3/4x1/2x1     | \$3.00 |
| "                   | 5x7/32x1 | 2.20   | "                  | 2 3/4x7/8x1     | 2.60   |
| "                   | 7x7/32x1 | 4.00   | "                  | 4x1/2x1         | 4.50   |
| "                   | 3x7/32x1 | 1.19   | "                  | 4x7/8x1         | 3.50   |
| "                   | 3x1/8x1  | 1.26   | "                  | 5x7/16x1        | 6.00   |
| "                   | 3x7/8x1  | 1.19   | "                  | 5x1x1           | 8.00   |
| "                   | 4x7/8x1  | 1.59   | "                  | 5 1/2x1 1/2x1   | 6.50   |
| "                   | 4x7/8x1  | 1.98   | "                  | 5x7/4x1 1/4     | 7.00   |
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72" N. B. P. Vert. Boring Mill, M.D.  
 6" Oster Pipe Mch. with dies, B. D.  
 Northern hand pwr. Cranes 10 & 12 ton.  
 Pitman Alligator Shear, cap. 1 1/4".  
 36"x16' S. & B. S.B.G. Lathe, T.A.  
 18"x8' Superior Q.C.G. Lathe, b. dr.  
 B-2 Nazel Air Ham. cap. 3" sq. M.D.  
 No. 4 B&S Univ Miller, div. H&T st.  
 No. 3 H&J dbl. angle Sh., cap 6x6x1".  
 No. 5 H&J Beam Punch, cap. 30" beams  
 800lb. Billings & S. Brd. Dr. Hammer  
 250lb. Little Giant Pwr. Ham., M.D.  
 Lennox Rotary Bevel Shear, 3/4" cap.

50" Bertsch pw. Sh. 16" gap, 3/16" cap.  
 80" Bertsch Bend. Rolls, 5/16" cap.  
 50 HP Bruce Abb. 2-cyl Vert. Gas E.  
 10' Garrison Pow. Press Brake, 16 ga.  
 8' Keene hand brake, cap. 16 gauge.  
 No. 5 H.I.S.T. Punch 62" th. cap. 1 1/2".  
 16" Cin. & 32" Cin. M. D. Shapers.  
 No. 6 Bryant Internal Grinder, b. d.  
 42"x10' D. & H. Openside Planer.  
 42" Bullard New Era bor. mill, s.h.m.d.  
 9 1/2"x12" Worth Air Comp, cap. 185 c.f.  
 4 1/2"x5" I-R Air Com. with air tank.  
 Rockford Hor. Boring Mill, 3" bar.

**Russell Machine Co., 1447 Oliver Bldg., Pittsburgh, Pa.**

|   |          |
|---|----------|
| Boring Mill, 12' Betts Vertical   | \$1,900. |
| Boring Mill, 5" bar Detrick & Harvey Horizontal Floor                   | 1,150.   |
| Bulldozer, No. 6 Williams & White, 20" stroke                           | 750.     |
| Drill, 7' Dreeses Radial, Universal                                     | 550.     |
| Drill, No. 54 Foote-Burt 6 spindle Rail, 3" cap.                        | 1,700.   |
| Gear Cutter, No. 6-A, 72"x20" Cincinnati                                | 1,250.   |
| Keyseater, No. 3 Baker Bros., cap. 24" long x24" wide                   | 575.     |
| Lathe, 54"x18' New Haven Engine   | 475.     |
| Planer, 60"x60"x16' Detrick & Harvey Openside                           | 2,750.   |
| Press, No. 92-B Toledo Double Crank, Geared, 36" wide                   | 800.     |
| Shear, 12"x10 gauge Niagara Power Squaring                              | 950.     |
| Swagers:—Etna No. 4, 2" cap.; No. 103, 1" cap.; Torrington 1" & 2" cap. |          |
| Turret Lathe, 36" Libby, 7 1/2" hole thru spindle                       | 2,250.   |

**D. C. Oviatt & Co., 2170 Lakeside Ave., Cleveland, O.**

## No Risk—Completely Rebuilt

10' Betts vertical Boring Mill, geared feeds, motor drive.  
 36" Bullard, New Era Type, vertical turret Lathe, motor drive.  
 30" King vertical Boring Mill, motor drive.  
 No. 31 Lucas horizontal Boring Mill, gear box, motor drive.  
 4' Fostick plain Radial Drill, gear box, motor drive.  
 16"x72" Landis crankshaft Grinder, self-contained, motor drive.  
 No. 2 Cincinnati vertical Milling Machine, slot nose, motor drive.

Send for Complete Stock List.

**Iroquois Machinery Co., No. 666 Ohio Street, BUFFALO, N. Y.**

# Late Type Machine Tools

Cincinnati Centerless Grinders (2).  
Blanchard No. 16 Vert. Grinder  
B. & S. No. 13 Univ. & Tool Gr.  
Heald No. 20 Vertical Grinder.  
No. 2 B. & S. Surface Grinders (4).  
No. 33 Abrasive Surface Grinder.  
24"x44" Landis Crankshaft Gr.  
62"x1½" Stamco Shear.  
96"x¾" Geo. Ohi Shear.  
96"x¾" Geo. Ohi Brake.  
16"x6" L. & S. Gd. Head Lathes.  
33"x12" L. & S. Cone Dr. Lathe.  
20"x10" Amer. Gd. Hd. Lathe.  
24"x10" Amer Gd. Hd. Lathe.  
46"x28" Houston S. & G. Lathe.  
60"x50" Pond Lathe.  
76"x40" Putnam Lathe.  
14"-20" Niles Vert. Boring Mill.

42" Bullard Vertical Turret.  
44"-36" Niles Vertical Turret.  
42" Gisholt Vertical Boring Mill.  
Barrett No. 1 Cylinder Borer.  
Lucas Horizontal Boring 3 lb. bar.  
1½" Ajax Upsetter.  
No. 2B Milwaukee Univ. Miller.  
No. 3B Milwaukee Univ. Miller.  
No. 4 Cinn. Vert. Miller, Late.  
10 K. W. Auto Toledo Welder.  
20" G. & E. Shaper Latest M. D.  
24" G. & E. Shaper Cone Drive.  
No. 2A W. & S. Turret Lathes (2).  
No. 1B Foster G. H. Turret.  
No. 21½ Bliss Incl. Power Press.  
10" Dill Slotter.  
Radial Drills, Keyseaters.

AND MANY OTHERS

**Kennard-Rafkin Machinery Corp.**

224-230 Culver Ave.,

1:1

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## Special Bargains For February

800 ton American Can Toggle Embossing Press.  
No. 727 Hamilton Double Crank Press, 72" bet. housings,  
10" stroke, 20" shut height, 25 H. P. 440-3-60 motor.  
No. 26 Hamilton Press, adj. bed, 4" stroke, geared motor  
drive, 10 H. P. 440-3-60.  
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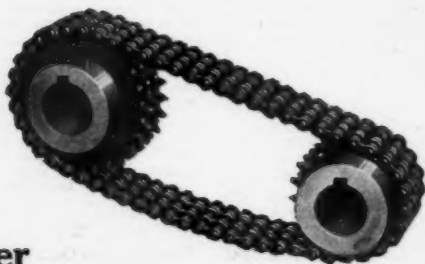
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